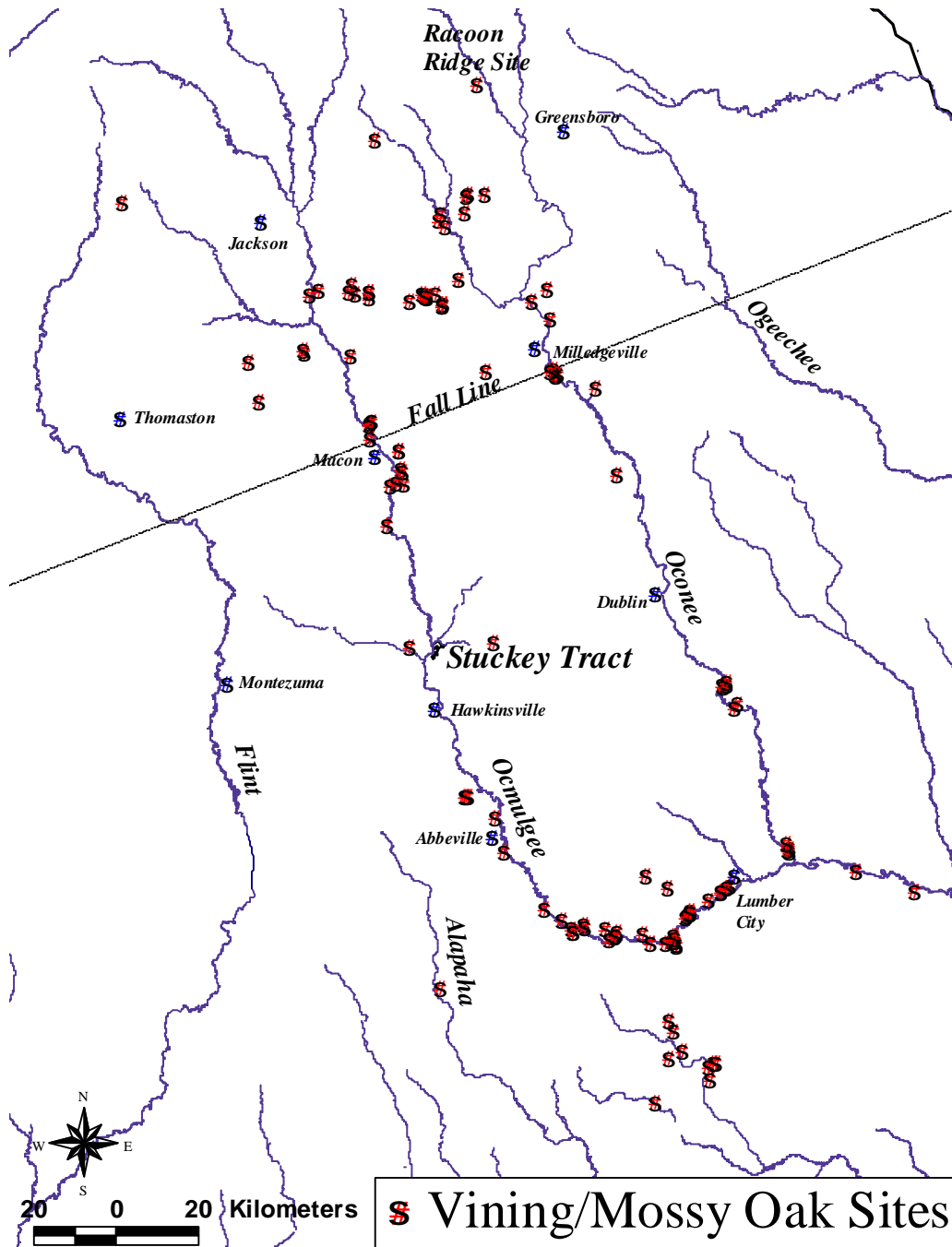


# Prehistory of the Stuckey Tract, Bleckley County, Georgia



July 2004

**PREHISTORY OF THE STUCKEY TRACT,  
BLECKLEY COUNTY, GEORGIA**

**Project No.: EDS-441(12)(13)  
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**November 2004**

The contents of this publication reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Department or Federal Highway Administration. This publication does not constitute a standard, specification, or regulation.



# **Abstract**

Under a contract with the Georgia Department of Transportation (GDOT) through EarthTech, Southern Research conducted an intensive survey of an 1136-acre tract known as the Stuckey Tract in the spring of 2003. The Stuckey Tract is located in Bleckley County, Georgia along the Ocmulgee River. The property will bridge the gap between two sections of the Ocmulgee Wildlife Management Area (OWMA), and will be managed by the Georgia Department of Natural Resources (GDNR) as part of the OWMA. The survey was driven by wetland mitigation in accordance with Section 106 of the National Historic Preservation Act. The goal of the study was to identify all cultural resources within the property, and to make recommendations concerning their eligibility for the National Register of Historic Places (NRHP). Forty-four archaeological sites and ten isolated artifact finds were documented. Nineteen of the sites are recommended as potentially eligible for the NRHP, while the remaining 25 sites and all of the isolated finds are recommended as ineligible for the NRHP. Under the terms of the contract, two report volumes were produced. The first volume (Keith 2004) consists of a standard technical report containing the results of the survey; the second (this one) is research-oriented and contains in-depth analysis and interpretation of the prehistoric occupation of the Stuckey Tract.

## Acknowledgements

The author wishes to extend his deepest thanks to the field crew who endured the incredibly-dense and seemingly never-ending briar patch that is aptly named the Stuckey Tract. Matt Wood, Mark Dingledein, Steve Marquardt, Glenn Strickland, and Damien Tietjen all kept up great spirits in the midst of the thorns. Fortunately, the wonderful accommodations at the Royal Inn in the city of Cochran allowed everyone to nurse their wounds and blow off steam from the hard work. Dean Wood was an invaluable source of information and support throughout all aspects of the project; in addition, he intuitively located the midden at Site 9BY51. Dan Elliott and Dean Wood provided very helpful comments on the simple stamped pottery we recovered. Not only was the Lab Director, Debra Wells, integral in the production of these reports (e.g., graphics, artifact database, GPS/GIS), but she was also a great sounding board for my ideas. Serving as both Project Manager and Editor, Grace Keith kept the project on track and as always helped to make the reports better. Shannon Zimmermann formatted the reports, while Glenn Strickland and Damien Tietjen are largely responsible for the graphical production of the site sketch maps. I am extremely appreciative of colleagues Keith Stephenson and Frankie Snow for all of their tremendously helpful insight into the archaeology of the area, particularly the ceramics, as well as to Rob Benson for information from the Bleckley County Public Fishing Lake project situated just south of the Stuckey Tract. With his great enthusiasm for the project, Shawn Patch of the Georgia Department Of Transportation was tremendously supportive and accommodating. David Leigh provided the valuable geomorphological and absolute dating data for the project.

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# Chapter 1. Introduction

This report is the second of two stand-alone volumes detailing the results of an intensive archaeological survey (and very limited testing) of the Stuckey Tract, an 1136-acre tract of land bordering the Ocmulgee River in Bleckley County, Georgia (Figure 1). The companion volume (Keith 2004) contains the technical aspects of the survey and the results, such as survey methodology, individual site descriptions and maps, an artifact inventory, and management recommendations. This document details the interpretations of the survey results, particularly in regards to the material culture and settlement patterns of the Native American cultures who once explored and occupied the area now known as the Stuckey Tract. Due to the preponderance of prehistoric sites and the paucity of historic sites within the tract, this report deals solely with the prehistoric occupations. Readers interested in the historic activities in the project area should consult the companion volume.

The Stuckey Tract is located between two significant prehistoric archaeological areas situated along the Ocmulgee River, the Fall Line to the north near Macon and the Big Bend to the south. Relatively few archaeological investigations have been

conducted in this intermediate area; those which have are relatively dated, non-intensive, or small in scale. However, more recent work (e.g., Stephenson et al. 1996; Gresham 1999; Benson et al. 2001) indicates that this area has great potential for contributing to the archaeological and anthropological knowledge of the region. The results of the present investigation confirm this potential.

This report examines the adaptations of the various cultures who inhabited the Stuckey Tract. While much of the analysis and interpretation is necessarily centered on the Stuckey Tract, the existing regional database is utilized in order to better understand these adaptations. Because the data from the Stuckey Tract are survey-level (with the exception of excavation data from two test units at 9BY51), certain issues (e.g., subsistence, seasonality) are largely unexplorable. Conversely, the data do allow such issues as the organization of lithic technology, settlement patterning, ceramic technology and tradition, and culture history to be investigated.

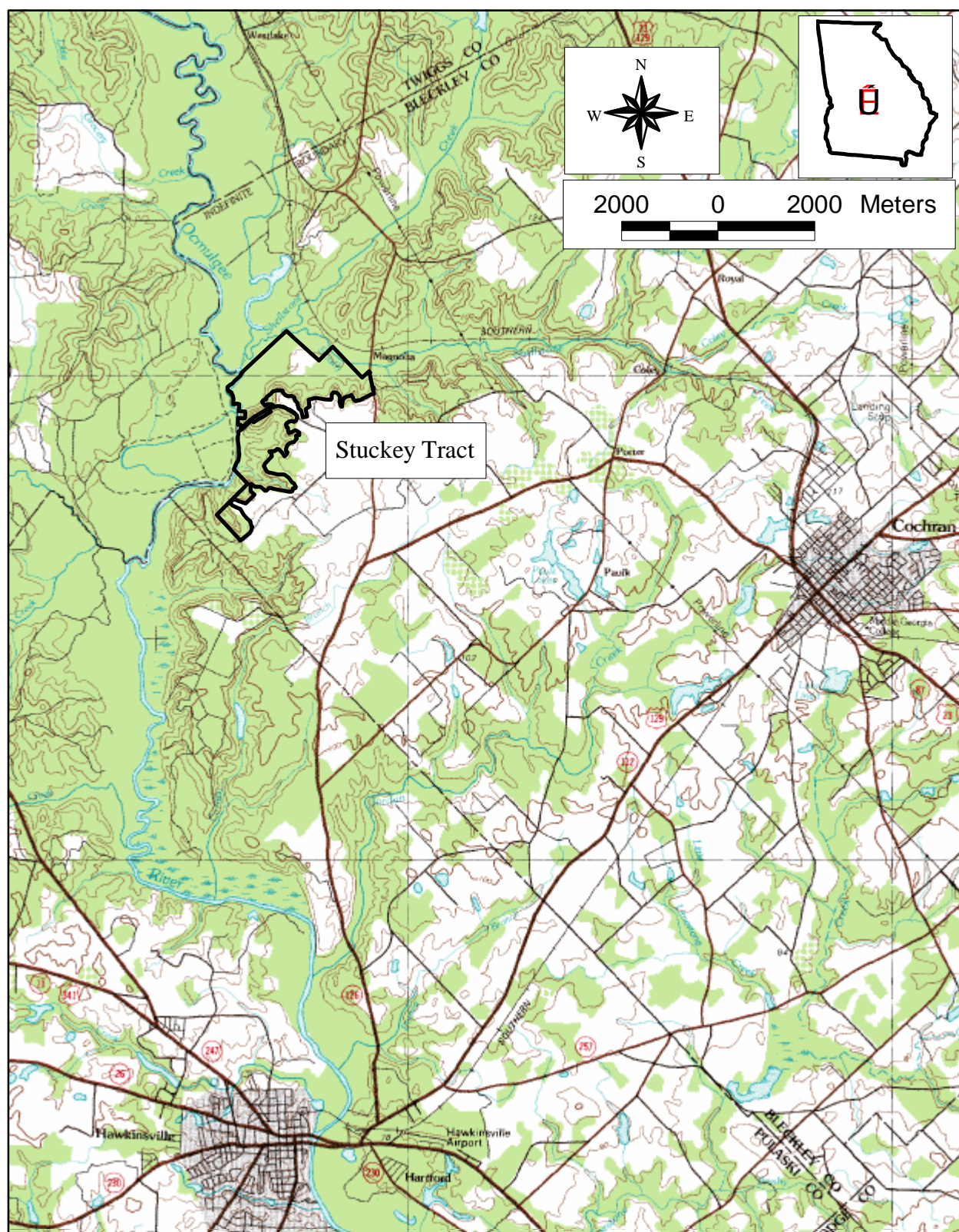


Figure 1. Project Area Location Map.

*Prehistory of the Stuckey Tract, Bleckley County, Georgia*



# Chapter 2. Environmental and Cultural Context

## ENVIRONMENTAL BACKGROUND

Located in western Bleckley County adjacent to the Ocmulgee River (Figure 2), the Stuckey Tract is situated near the southern boundary of the Fall Line Hills District of the Atlantic Coastal Plain (Clark and Zisa 1976). The Fall Line Hills are a highly dissected and relatively hilly zone separating the Piedmont from the Coastal Plain; the drainages consist of marshy floodplains and narrow stream terraces. Wharton (1978) shows the area as falling just within the Fall Line Red Hills, while just to the east lies the Vidalia Upland. According to the *Geologic Map of Georgia* (Georgia Department of Natural Resources 1976), the primary geological formation underlying the project area is Suwannee Limestone and its residuum, while narrow bands of Irwinton Sand, Twiggs Clay, and Ocala Limestone parallel the river. Chert, an important resource to prehistoric peoples for the manufacture of tools, is known to outcrop in Bleckley, Pulaski, and Twiggs counties, and indeed, significant outcrops were identified within the project area during the survey.

The eastern boundary of the Stuckey Tract roughly follows the 350-foot contour, which separates a relatively flat and extensive upland terrace to the east from the project area's sloping ridges which drop down to the Ocmulgee and Shellstone valleys (Figure 3). The ridges within the Stuckey Tract generally contain little level land, and some are quite steep. The northern boundary of the Stuckey Tract roughly follows Shellstone Creek to its confluence with the Ocmulgee River, and an extensive bottomland is located in the northern portion of the tract, providing a floodplain for these drainages. For this area of the Ocmulgee River, the uplands extend close to the river. Looking upstream north of where Shellstone Creek flows into the river at the northern limit of the project area, the river floodplain is vast and expansive, reaching a width of 2.3 kilometers (1.4 miles) near the Bleckley and Twiggs county line. Within the Stuckey Tract, approximately 300 acres is estimated as swamp and/or perennial wetlands. Within the bottomland are slightly-elevated terraces which are well-drained and dry; in most cases, these areas are only 40 to 80

cm above the surrounding wetlands. Such high spots were commonly occupied by prehistoric peoples.

Generally, those areas within the Stuckey Tract not planted in pine are wet and not suited for pine farming. Bottomland hardwood swamp vegetation at the Robins Air Force Base approximately 12 miles north of the project area consists of canopy species green ash, tupelo, sweetgum, elm, and oaks such as swamp laurel, overcup, cherrybark, and swamp chestnut, while understory species include giant cane, swamp dogwood, American hornbeam, red maple, and buttonbush (<http://www.em.robins.af.mil/conserv/natural/natcom.htm>). Based on the underlying soils, topography, and water input, many areas within the bottomland are seasonally wet, as evidenced by tupelo and cypress-gum swamps.

Much of the uplands in the Stuckey Tract were clearcut four to seven years ago (Figure 4). The majority of the uplands which were not recently clearcut are covered in stands of planted pine; each stand typically consists of similar-age trees. Some of these clearcuts have been replanted with pine; some have not. In the bottomlands are several areas of approximately 10 year old planted pines. These trees are densely planted in rows, while the understory of these stands is dense with vines and briars. In addition, two slightly-elevated areas in the bottomland in the northern portion of the Stuckey Tract (observable as the non-forested white areas in Figure 3) contain approximately 20-25 year old planted pines. As the trees age, the stands are selectively thinned (for pulpwood), so the understory becomes more open. All of the pine stands contain little plant diversity.

Most of those areas within the Stuckey Tract not planted in pines are wet and not suited for pine farming. However, there are a few patches of ridge sideslopes and stream corridors which are shaded by relatively mature and intact hardwood communities (Figure 5). Intact hardwood communities are also found in the swampy bottomlands. Similar to that described for the swamps of Warner Robins Air Force Base to the north, these swamp areas include canopy species such as green ash, tupelo, sweetgum, elm, and oaks (swamp laurel, overcup,

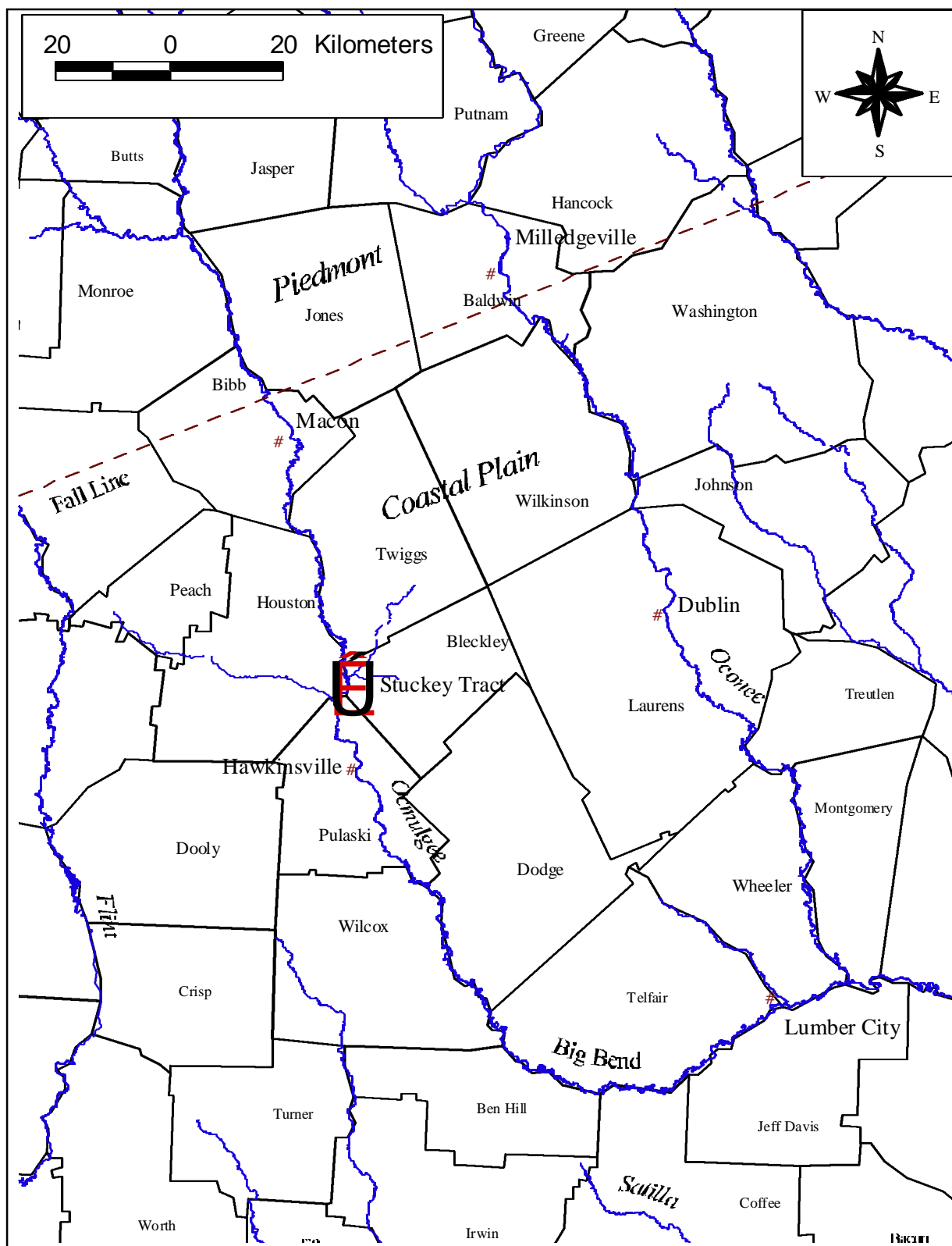


Figure 2. Physiographic Location of the Stuckey Tract.

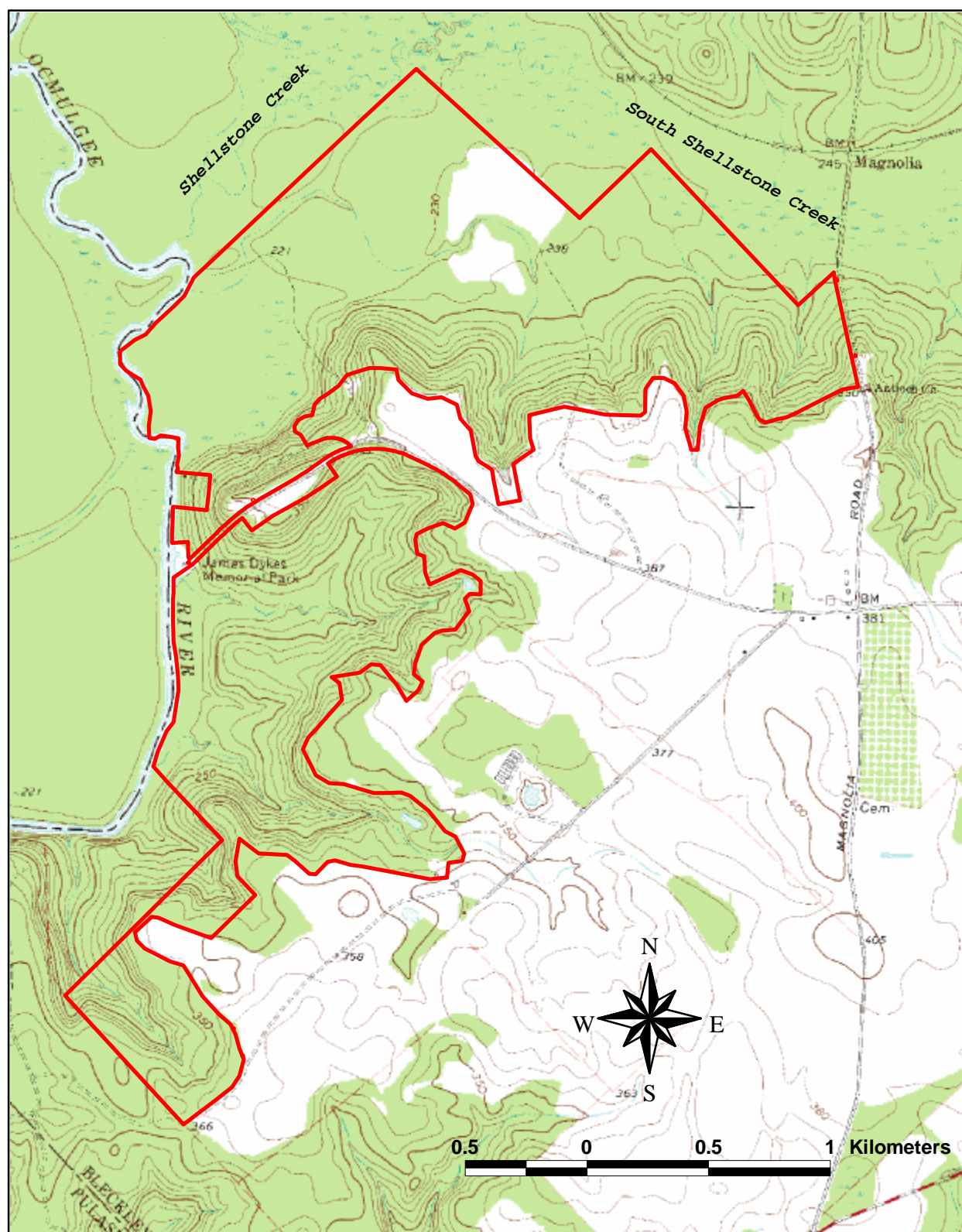


Figure 3. Topographic Setting of the Stuckey Tract.



*View South from Northern End of 9BY37.*



*View Northeast from 9BY35.*

*Figure 4. View of Pine Planted Areas.*





*View East Along Ridge Slope Above Swamp in Northern Portion of Project Area.*



*View South Upstream from Locus A, 9BY44*

*Figure 5. View of Hardwood Communities.*



cherrybark, and swamp chestnut), and understory species such as giant cane, swamp dogwood, American hornbeam, red maple, and buttonbush (<http://www.em.robins.af.mil/conserve/natural/natcom.htm>). Based on the underlying soils, topography, and water input, many areas within the bottomland are frequently flooded and seasonally wet (Figure 6).

One of the most interesting features of the project area is the ubiquitous upland seeps or wetland areas which occur on the ridgetop slopes. Generally occurring on side or front slopes on low-gradient benches at the base of a steeper slope, these areas are characterized by saturated highly organic soil and standing pools of water. Soils in these areas consist of black silty clay overlying gray clay. These areas may represent bogs/fens or perennial seeps, which have formed as a result of seeping ground water due to an impenetrable underlying stratum such as bedrock or clay. Such areas typically contain a high diversity of bog flora, although unfortunately the present vegetation in these spots reflects the area's use-history of agriculture and silviculture. These upland wetland areas may have been attractive locations for Native Americans.

Various animal species inhabiting the area presently include white-tail deer, rabbit, fox, black bear, bobcat, skunk, raccoon, opossum, hawk, quail, turtle, toad, water snakes, salamanders, and fish.

## **PREVIOUS INVESTIGATIONS IN THE VICINITY**

Several archaeological investigations have been conducted in the project vicinity, yet only the multiphase investigations of the Bleckley County Public Fishing Lake (Gresham 1999; Benson et. al 2001; report in progress) are both recent and of a large scale. Figure 7 shows the location of selected sites discussed in this section and the following section.

In 1965, under contract with the Heart of Georgia Planning and Development Commission, Georgia State College conducted a survey of nine central Georgia counties for the purpose of identifying prehistoric sites which could be developed for tourism (Nielsen 1967). The project was supervised by Lewis H. Larson and field directed and reported by Jerry Nielsen. In addition to four other prehistoric sites in Bleckley County, the survey identified Site 9BY4, a lithic and ceramic scatter which extends up to the boundary of the project area. According to the state site form, the site consists of prehistoric artifacts scattered over approximately an acre in a corn field. Artifacts observed and/or collected from the site included a "few small pot sherds, projectile points, and flint chips", as well as large flint cores. The NRHP status is listed as unknown.

Frankie Snow (1977a, 1977b) conducted a large-scale survey of the Big Bend region of the Ocmulgee River, with the north-



*Figure 6. View West-Northwest of Ocmulgee River Floodplain Northwest of 9BY41.*

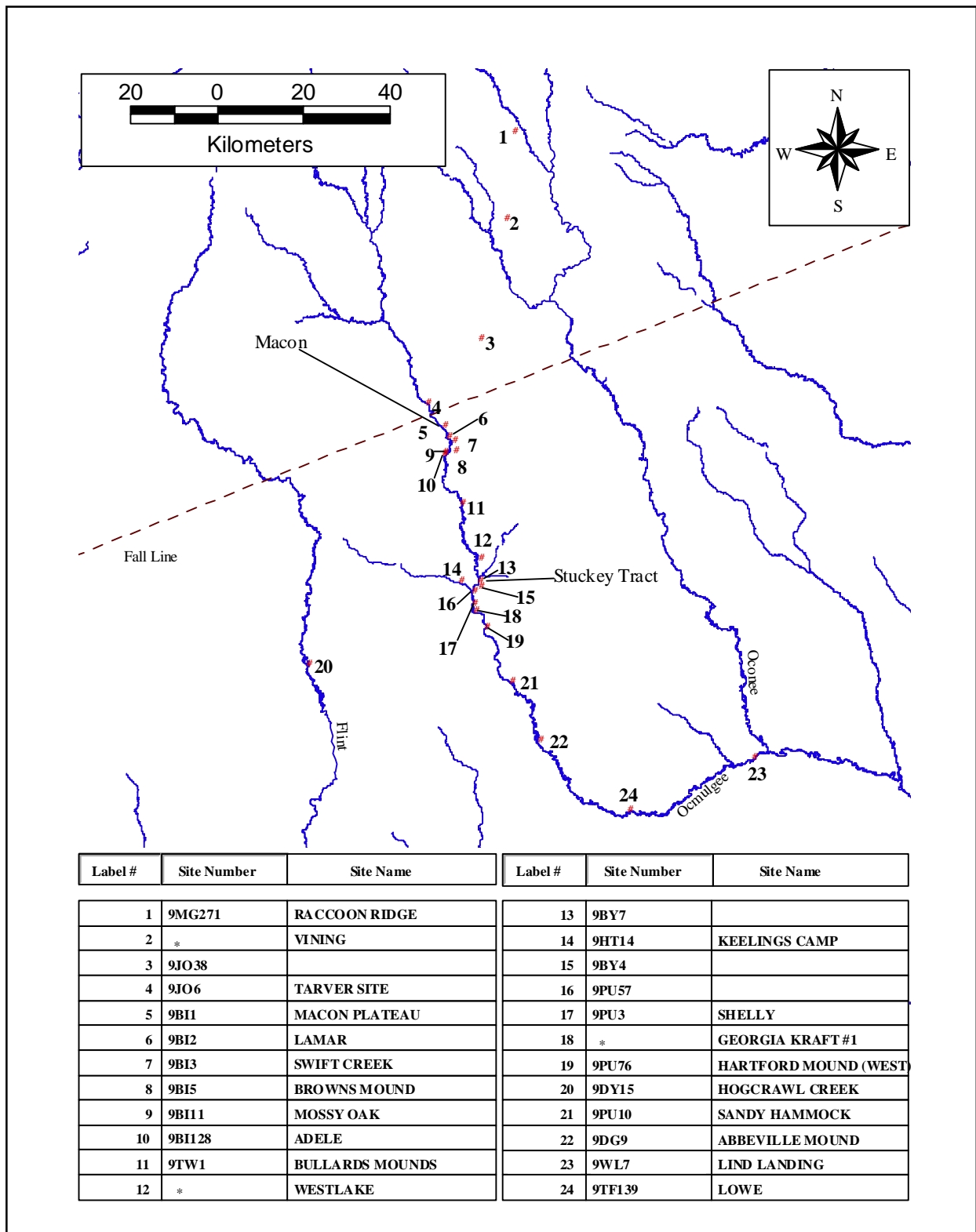


Figure 7. Locations of Selected Sites Discussed in Text (\*State Site Number Unavailable).

ern limit at Hawkinsville. The survey involved systematic surface inspection and collection, primarily of clearcut areas in 18 counties. Over 300 aboriginal sites were recorded, with components spanning the entire period of human habitation. Snow continues to conduct research in this area, focusing primarily on the Swift Creek culture (e.g., Snow 1975; Snow and Stephenson 1990, 1998; Stoltman and Snow 1998).

Steinen (n.d.) surveyed approximately 4,000 acres in the area between Hawkinsville and Warner Robbins, and examined the surface collections from 58 sites donated by an amateur to West Georgia College. (The author was not able to obtain a copy of the survey documentation, but relied on secondary references [e.g., Schnell and Wright 1993; Steinen 1995] and personal communication with Steinen for information about the investigation). As the bottomlands were wet, most of the survey was conducted in the uplands, and generally under poor surface visibility conditions; 131 sites were discovered or relocated. Steinen (personal communication) reported “lots of cordmarked pottery which fits Snow’s Ocmulgee series nicely; sites on terraces over the Ocmulgee; a Weeden Island mound sitting in a field surrounded by cordmarked pottery; and some Swift Creek materials, one site a solid Etowah III-IV but with cordmarked materials as well”. Unfortunately, none of these sites seem to have been recorded in the state archaeological site files.

Stephenson (1988, 1990) conducted test excavations at thirteen sites in Coffee, Dodge, Jeff Davis, and Wheeler counties in order to investigate the context of [Ocmulgee] cordmarked ceramics in the Big Bend region. As a result of the study, Stephenson (1990) found that cordmarked pottery began after the late Swift Creek period around 800 A.D. and continued to be in use until approximately 1200 A.D. Since that study, Stephenson et al. (1996) have refined the temporal placement of the Ocmulgee Cordmarked occupation, placing it from 850 to 1250 A.D.

Crook (1987) conducted data recovery at the Lowe Site (9TF139), a multicomponent prehistoric site located on a first terrace above the Ocmulgee River in the Big Bend area. The site was first recorded and tested by Bowen (1984) as a result of a Georgia Department of Transportation survey for the Jacksonville Ferry bridge replacement. Components identified at the site include Paleoindian, Early Archaic, Late Archaic, Early Woodland, Middle Woodland, Late Woodland, and Mississippian. Crook (1987) reports that cordmarked pottery is the most common decorated ware at the site, accounting for 60% of the decorated sherds; simple-stamped accounts for 26% of the decorated wares, and check-stamped for 11%. Of the total assemblage, sand-tempered plain com-

prises approximately 50%, fiber-tempered plain 24%, and cordmarked sherds 14%.

Less than 2,000 feet south of the southern tip of the Stuckey Tract, Southeastern Archeological Services, Inc. (SAS) has conducted survey (Gresham 1999), site testing (Benson et al. 2001), and data recovery (report in progress) for the proposed Bleckley County Public Fishing Lake. This approximately 186-acre area consists of an unnamed stream and the ridge ends, noses and toes surrounding it. The survey recorded 21 sites, or one site per 8.8 acres, a very high site density. Cultural components identified during survey and testing include Early Archaic, Middle Archaic, Late Archaic, Middle Woodland, Late Woodland, and Early Mississippian. The most intensive occupation of the area occurred during the Late Archaic and the Middle Woodland periods. Interestingly, an important finding of the SAS investigations of the proposed fishing lake was that several of the prehistoric sites were located on relatively steep slopes (i.e., 7 – 10 %).

On the other side of the Ocmulgee River within the Oaky Woods Wildlife Management Area in Houston County, approximately 2.5 miles northwest of the Stuckey Tract, a survey was conducted of an existing dirt road prior to proposed improvements (Rogers 2002). The survey of the approximately 1.1-km road was conducted in 2002 by Ronnie Rogers of the Georgia Department of Natural Resources. The survey, conducted through surface inspection only, identified one site and two isolated finds. The site, 9HT168, consisted of a sparse scatter of chert debitage, chunks, and a core along a 270-m length of the road above Big Grocery Creek. The site was recommended ineligible for the NRHP. No specific information is provided in the report concerning the isolated finds, although their location is recorded on a map attached to the report.

Approximately 7.25 miles south of the Stuckey Tract in the town of Hartford, Garrow & Associates, Inc. conducted a survey and reconnaissance for the proposed Pulaski 46/25KV substation and transmission line (McNutt 1990). The project area consisted of a 300’ x 300’ substation site and an approximately 2.5-mile long transmission line which ran north to end at the Hawkinsville substation site. Four archaeological sites were identified during the survey. One of the sites, 9PU1, also known as the Hartford Mound Site, formerly had an approximately ten foot high mound of Swift Creek origin; the mound was leveled by the landowner circa 1985. In addition to Swift Creek Complicated Stamped, plain, and unidentified decorated sherds, an Early Archaic projectile point/knife and a Late Archaic Savannah River PPK were recovered from this site. Woodland ceramics and lithic artifacts were recovered



from the other sites, while 19<sup>th</sup> and 20<sup>th</sup> century artifacts were also recovered from one of the sites in a mixed context with the prehistoric remains. All of the sites were recommended ineligible for the NRHP.

As a result of impending destruction in the late 1980s, the Hartford Mound Site has also been the subject of investigation by Frankie Snow and Keith Stephenson (Snow 1998; Snow and Stephenson 1990, 1991, 1993, and 1998). The site contains both Early and Middle Swift Creek remains: a sub-mound midden and the mound date to the early Swift Creek period (350 to 400 A.D.), while the village area surrounding the mound appears to have been occupied during the Middle Swift Creek period (400 to 450 A.D.). A sub-mound structure was documented, consisting of a central refuse pit, four central support posts, a pattern of outer wall posts, small storage pits, and a limestone rubble feature (Snow and Stephenson 1998).

BHE Environmental, Inc. surveyed the proposed AT&T Fiber Optic Conduit Route from Atlanta to Jacksonville, Florida (Garcia-Herreros and Miller 2000). In a section of the corridor from the small communities of Pabst to Hayneville in Houston County, located 7.8 miles west of the Stuckey Tract, they identified three sites (9HT147, 9HT148, and 9HT149). Diagnostic artifacts reported from these three sites include a Middle Archaic Morrow Mountain PPK, a Late Archaic PPK, Deptford Check Stamped sherds, Dunlap Fabric Impressed sherds, plain sherds, and historic artifacts. They state that these sites are unlikely to be eligible for the NRHP (Garcia-Herreros and Miller 2000).

Williams and Evans (1993) conducted excavations at the multi-mound prehistoric site, Bullard Landing (9TW1), located up the Ocmulgee River approximately 15 miles from the Stuckey Tract as the crow flies. The primary remains at the site represent a Late Mississippian Lamar village with 24 mounds in the floodplain of the river. What is interesting about these mounds are their low height – generally, they are between 30 and 40 cm high, while the highest mound is 1.5 meters tall. The mounds range from 12 to 20 m in diameter, although most are approximately 15 m in diameter. Additionally, the majority of the mounds have raised rims, so that the interior appears to be depressed. Many of the mounds appear to be in pairs, and several form a plaza in the southern portion of the site. Williams and Evans (1993) believe that earth-covered structures were built atop the mounds, and the collapsing of such structures accounts for the raised rims and depressed centers.

Another multi-mound Lamar period site was located during a survey of the 1,226-acre Cherokee Brick and Tile Company Tract in the floodplain of the Ocmulgee River approximately

25 linear miles upriver from the Stuckey Tract (Bland et al. 2001). The Lamar period mound site, 9BI128 (the Adele Site), consists of a village having 17 mounds. The highest mound is 1.5 m in height, while the others range between 60 and 140 cm in height. Unlike the Bullard Landing Site downriver, none of these mounds have raised rims, although this may be due to alluvium which has accumulated. The majority of these mounds are believed to be house mounds, on which domestic structures were located (Bland et al. 2001). In addition to the mound site, Environmental Services, Inc. recorded nine prehistoric sites with components ranging from the Early Archaic to the Mississippian periods. Seven of the nine sites were recommended as eligible or potentially eligible for the NRHP; the remaining two sites were recommended ineligible.

## **CULTURAL BACKGROUND**

The earliest arrival of humans into the Americas and the southeastern U.S. has traditionally been dated at approximately 11,500 years ago, attributable to the Clovis or Paleoindian culture. However, recent research at a handful of sites in the Americas may push the entry date back a few thousand years. In the Southeast, apparently pre-Clovis archaeological remains have been recovered from the Cactus Hill Site in southeastern Virginia and from the Topper Site in South Carolina. At both sites, cultural remains have been found below Paleoindian remains, separated by relatively thin sterile strata. Radiocarbon dates obtained from Cactus Hill in association with these remains range between approximately 15,000 and 17,000 years before present (YBP) (<http://www.archaeology.org/online/news/cactus.html>). OSL dates from the Topper Site indicate that the remains date to at least 16,000 YBP (<http://anthro.org/topper2000.htm>). In addition to broken cortical chert chunks, chert debitage, and quartz cobbles, researchers at the Topper Site have identified small utilized chert flakes, unifacially retouched flakes, burins and burin spalls, and microblades. Also, numerous bend-break tools, characterized by intentionally-broken edges which typically form 90-degree angles, were identified. These tools are believed to have functioned as burins and gravers in working organic media such as antler, bone, wood and ivory (<http://anthro.org/topper2001.htm>). Due to the infancy of the research, there is not yet general consensus by the archaeological community concerning these findings.

Organic cultural remains from two archaeological sites in Florida, Page-Ladson and Little Salt Springs, dated to between 12,000 and 12,500 YBP, predate the widely-accepted date for the colonization of the Southeast by 500 to 1,000 years (Anderson et al. 1996:8; Clausen et al. 1979:611; Dunbar

and Webb 1996). In addition to evidence from other sites throughout the U.S., remains from these two sites indicate that early humans were exploiting Late Pleistocene megafauna such as mammoth, mastodon, horse, and giant tortoise.

In comparison to the scant (and unverified) pre-Clovis remains, there is an abundance of evidence for human presence in the Southeast by 11,500 YBP. This evidence consists of fluted and unfluted lanceolate projectile points such as Clovis, Cumberland, Suwanee, and Simpson, as well as associated lithic tools. Paleoindian populations are generally believed to have entered the New World from northeast Asia via the Bering Strait, by land and/or sea, and quickly reached the Southeast. Archaeological and climatological data suggest that these populations were residentially mobile, and utilized a foraging strategy for the procurement of food (Anderson et al. 1996:7). Regardless, as in the rest of the Southeast, Paleoindian sites are relatively elusive in Georgia, and few intact buried Paleoindian components are known (Anderson et al. 1990; Ledbetter et al. 1996).

The Paleoindian period is divided into three temporal subperiods: Early, Middle, and Late. The Early Paleoindian subperiod is dated from 11,500 to 11,000 YBP. Artifacts from this period include the classic fluted point forms, such as Clovis. At the tail end of the Early subperiod and into the Middle Paleoindian subperiod (11,000 – 10,500 YBP), other fluted and unfluted forms were being produced, such as Cumberland, Suwanee, and Simpson. The Late Paleoindian subperiod, 10,500 – 9,900 YBP, is characterized by Dalton, Quad, and Beaver Lake projectile points. The Quad and Beaver Lake forms are believed to slightly predate the Dalton type, which was produced into the beginning of the Early Archaic period.

While no Paleoindian components have been recorded in Bleckley County, Paleoindian remains from all subperiods have been recorded downriver in the Big Bend region (Blanton and Snow 1986, 1989; Snow 1977a, 1977b), upriver at Macon Plateau (Ledbetter et al. 1996), and in the surrounding counties (i.e., Dodge, Laurens, Houston, Twiggs, and Wilkinson) by Anderson et al. (1990). A significant Dalton presence was discovered by Snow (1977a, 1977b) in the Feronia locality of the Big Bend region downstream from the Stuckey Tract. The Dalton sites tended to be located around springheads on a ridge overlooking the Ocmulgee River floodplain. Blanton and Snow (1986, 1989) posit the relatively dense concentration of sites might be the result of population aggregation around a significant environmental interface, the divide between the Atlantic and Gulf Coast watersheds.

As described above, there is substantial evidence that Paleoindians targeted large megafauna, particularly during the Early Paleoindian subperiod. However, most researchers believe that the Paleoindian subsistence economy grew increasingly diverse and generalized in correlation with the extinction of megafauna, and relied more heavily upon small fauna and a variety of plant foods (Anderson et al. 1996).

The shift to a foraging and generalized subsistence economy marks the beginning of the Early Archaic period, dated from 9,900 to 7,900 YBP, and may be in part predicated by a shift to a warmer climate at the beginning of the Holocene period (Anderson et al. 1996). This subsistence shift also may be reflected by the smaller size of the points. New point forms emerge during the Early Archaic period, including side-notched, corner-notched, and bifurcated types, some of which are beveled and/or serrated. Point types include Kirk, Palmer, Big Sandy, Bolen, Taylor, and LeCroy. Generally, side-notched forms are thought to slightly predate the corner-notched forms, which in turn predate bifurcated and stemmed types. In the Big Bend region, Snow (1977a) has recovered numerous Kirk Stemmed/Serrated points; this type is believed to occur at the tail end of the Early Archaic period (Elliott and Sassaman 1995). Unifacial tools continue in similar form from the previous period, and also underwent extensive use and resharpening.

Throughout Georgia, Early Archaic sites are much more common than earlier Paleoindian sites. In the survey of the nearby fishing lake just to the south, Gresham (1999) recovered one Bolen Beveled point at 9PU71; during testing (Benson et al. 2001), a fragment of another Bolen Beveled point was recovered from the same site and a probable Early Archaic primarily-unifacial chert tool was recovered from 9PU69. Numerous Early Archaic sites have been recorded by Snow (1977a) in the Big Bend region (Elliott and Sassaman 1995).

In their “band-macroband” model, Anderson and Hanson (1988) suggest that Early Archaic settlement along the Savannah River drainage was largely influenced by environmental structure, biological interaction, information exchange, and demographic structure (Anderson 1996:39). In this model, populations occupied logistically-provisioned seasonal base camps in the Coastal Plain during the winter and numerous short-term foraging camps during the rest of the year (Anderson 1996:41). These populations moved toward the coast during the early spring, and returned to the upper Coastal Plain and Piedmont in the late spring, summer, and early fall. Bands are believed to have aggregated at the Fall Line for the purpose of social interaction and information exchange.

In a study of Early Archaic settlement along the Oconee River in the Piedmont, O'Steen (1983, 1996) found that sites were most concentrated in the area of river shoals, and that site density is higher in upland areas than in floodplain settings. Furthermore, the data suggest that the environmental resource base of the shoals may have permitted a more sedentary Early Archaic settlement pattern, in comparison to the band-macroband model posited for the Savannah River basin.

Other researchers (Daniel 1994, 1996; Gardner 1977, 1981, 1983, 1989; Goodyear 1989) have argued that lithic raw material distribution/availability was a primary factor in Early Archaic settlement patterning. Such arguments are predicated on the critical nature of high-quality knappable stone to Early Archaic peoples: specifically, the movement of groups were tied or "tethered" to sources of knappable stone. Daniel (1996) acknowledges that factors outlined in the band-macroband model (Anderson and Hanson 1988) likely shaped settlement patterns, but that lithic resource distribution were at play as well. Interestingly, the concentration of Early Archaic sites recorded by Snow in the Big Bend region are in an area lacking chert sources, yet many of the sites contain dense Coastal Plain chert (CPC) assemblages. Such a situation indicates factors other than tethering to lithic resources were at work (Elliott and Sassaman 1995).

Generally, Middle Archaic (7,900 – 5,000 YBP) period cultural adaptation in the Coastal Plain is less understood than that for the Piedmont (Elliott and Sassaman 1995). There appears to be a distinct split between Piedmont and Coastal Plain populations. The Middle Archaic Piedmont archaeological records indicate that sites were generally small, lacked assemblage diversity, and had no obvious locational biases. Middle Archaic point types that occur throughout the Piedmont include Morrow Mountain, Guilford, Stanly, and Halifax, yet these Piedmont point types are rare to non-existent in the Coastal Plain. Rather, the occurrence of point types in the Big Bend region similar to the Florida Archaic Stemmed types described by Bullen (1975) indicates a cultural affiliation with groups to the south in the Florida area (Snow 1977a; Elliott and Sassaman 1995).

Due to the general paucity of sites dating to the Middle Archaic in the Coastal Plain, some researchers believe that this area was largely abandoned. However, as Elliott and Sassaman (1995) suggest, we may simply have little understanding of the cultural adaptations of Middle Archaic peoples due to the scarcity of data. Regardless, a picture is emerging that indicates that these peoples turned their focus away from river settings toward environmental patches such as seeps,

springs, and bays. Furthermore, there is a greater reliance on local lithic sources than in previous periods, and mobility of these populations appears to have been greater than that of Early Archaic peoples.

Following this pattern of Middle Archaic site paucity, sites dating to this period are rare in the project vicinity. Three Middle Archaic sites are reported in the state site files for Dodge and Pulaski counties. Gresham (1999) recovered no Middle Archaic components during the survey of the fishing lake. During testing (Benson et al. 2001), however, one large daltonite/mylonite Morrow Mountain I/Maples biface was recovered from 9PU69, and potential Middle Archaic biface fragments were recovered from 9PU57 and 9PU71.

Occupation of the Coastal Plain greatly intensifies during the Late Archaic period (5,000 – 3,000 YBP). Populations became more sedentary, with residential base camps frequently located in floodplain settings. Smaller, special-activity sites (i.e., hunting, resource extraction, and collecting stations) occur in the areas surrounding these base camps. While a generalized hunting-gathering subsistence strategy was still being used, significant additions were integrated into the system. The intentional cultivation of native plant foods, known as horticulture, begins during this time frame, as does intensive shell-fishing, particularly along the coast and the Savannah River.

In conjunction with the increase in sedentism and changes in the subsistence strategies, important innovations in heating/cooking technology occur during this period. By the beginning of the period, perforated slabs made of soapstone (available in the Piedmont) were being used for cooking; these artifacts are found at sites along the Savannah River Valley, yet are uncommon west of the Oconee River. Vessels made of soapstone are found throughout the Southeast; absolute dates for these artifacts in Georgia range in age from approximately 4,100 to 2,500 YBP (Elliott and Sassaman 1995).

Beginning around 4,500 YBP in the Savannah River basin in the Coastal Plain, clay tempered with fiber was fired to produce pottery. Known as Stallings Island for the site near Augusta in the Savannah River, this is a relatively thick and poorly fired ware. It was not until approximately 3,700 YBP that such pottery was used in the Piedmont portion of the same river valley (Elliott and Sassaman 1995). Stallings Island pottery includes plain, punctate, and incised surface treatments. In the Big Bend region, Snow (1977a) has identified two sandy-paste variants of fiber-tempered pottery. The more common series, named Satilla for its occurrence on sites in the watershed of the same name, is a relatively thin sand

and fiber tempered ware; surface treatments may include plain, simple stamping, and check stamping (Elliott and Sassaman 1995; Snow 1977a). The Satilla series is very similar to the Norwood series defined for Florida (Milanich 1994; Phelps 1965), yet the check stamping does not occur in the Norwood series. Elliott and Sassaman (1995) estimate an age range of 3,000-2,500 YBP for the Satilla wares. The other variant occurs on sites along the Ocmulgee River and is much thicker than Satilla, having a mean thickness of 11.1 mm. These wares are primarily plain, although punctated and incised sherds (similar to Stallings, St. Simons, and Orange types) occur as well; they can co-occur with soapstone vessel sherds, indicating to Elliott and Sassaman (1995) a date no earlier than 3,500 YBP.

The dominant Late Archaic projectile point form was square-stemmed (broadly referred to as Late Archaic Stemmed); the Savannah River type is a more clearly-defined point and is the most common Late Archaic lithic diagnostic. Other point types dating to this period include Kiokee Creek, Paris Island Stemmed, Abbey, Arrendondo, and Elora (Whatley 2002).

In the counties surrounding the project area, Late Archaic sites are common. Indeed, several Late Archaic Stemmed points and fiber-tempered sherds were recovered during the survey (Gresham 1999) and testing (Benson et al. 2001) of the fishing lake.

The Woodland period (2,500 – 1,150 YBP) in the Southeast is characterized by widespread use of pottery, increased sedentism, and a greater reliance on horticulture, although hunting and gathering continued to be an important subsistence strategy. The Woodland period is divided into three periods – Early, Middle, and Late – based primarily on ceramic variability and decoration. Ceramic technology improved through the use of sand and/or grit temper, replacing the fiber temper used during the Late Archaic period. The following are descriptions of the various Woodland pottery types which are known to occur in the project vicinity:

- ◆ *Deptford Check Stamped*: check stamping occurs in a variety of sizes and types, including small, large, bold, and linear. Shapes of the checks may include squares, rectangles, rhomboids, and triangles. The entire vessel exterior was stamped, and the interior often exhibits smoothing tool marks. Deptford vessels may include conoidal jars, deep bowls, and flattened globular bowls, frequently having tetrapods; rims are straight or outflaring and commonly have rounded lips. These wares were made by coiling, and consequently, sherds are often broken at the

interface of two coils. (Griffin and Sears 1950; Steinen 1995; Wauchope 1966:48-52; Williams 1999; Williams and Thompson 1999:36-39).

- ◆ *Deptford Simple Stamped*: consists of simple parallel linear grooves, generally 2 to 5 mm in width, although 7.5 mm wide lines have been observed. The stamp was applied at any angle, relative to the vessel or other stamped angles. The entire exterior of the vessel was stamped; the interiors often exhibit smoothing tool marks (Wauchope 1966:47-8; Williams and Thompson 1999:39).
- ◆ *Swift Creek Complicated Stamped, Early Variety*: fine sandy paste and typically has scalloped/notched rims and small tetrapods. Hundreds of designs that are primarily curvilinear. Designs and motifs include omega and teardrop-shaped elements filled with parallel lines or checks, concentric circles with central dot, ladder-like fillers, diamonds with semicircles, scrolls, filfot cross, nested ovals, connected spirals, and winged concentric circles (Snow 1975, 1998; Steinen 1995; Wauchope 1966:55; Williams and Thompson 1999:123).
- ◆ *Swift Creek Complicated Stamped, Late Variety*: has either a fine sandy or coarse sand paste and rims are often folded and/or thickened. As with early variety, designs are numerous and quite varied. Designs include figure 8 variations, three lobed ladder, hatched teardrops or snowshoes, concentric spirals, concentric circles, interlocking scrolls and rectilinear elements, intertwined meanders, and concentric lines. Stamping is bolder and less well-executed compared to Early Swift Creek (Snow 1975, 1998; Steinen 1995; Williams and Thompson 1999:124).
- ◆ *Napier Complicated Stamped*: lands and grooves thinner and narrower than Swift Creek designs. Designs include multiple lines which pass back and forth across each other with parallel line filler; zig-zagging multiline strands forming diamond-shaped enclosures with parallel line filler; multiline straight bands with multiline chevrons; combinations of small concentric circles with multiline diamonds, crosses, or chevrons with parallel line filler; curvilinear hour-glass shapes paired with parallel line filler; nested diamonds; and alternating bands of horizontal, vertical, or diagonal lines (Wauchope 1966:58-9; Williams and Thompson 1999:83-4).

- ◆ *Woodstock Complicated Stamped*: characterized by stamped diamonds, with the diamonds frequently arranged in lines like a non-interlocking chain and parallel lines generally at right angles to the chain. Jabbed punctations occasionally occur (Wauchope 1966:60-2; Williams and Thompson 1999:142-4).
- ◆ *Weeden Island*: series includes Incised and Punctated varieties. Incised designs include curvilinear elements, continuous meanders, locate forms, hachure, cross hachures, and fields of punctation; some background bands are occasionally painted red. Punctated pottery designs include continuous meanders, scrolls, lobate forms, circles, triangles, and leaf-like forms; deep, rounded punctations and hollow reed punctations mark termination or segmentation of lines. Plain Weeden Island pottery is often identified by a folded rim or a thickened, wedge-shaped rim with a squared lip which is often underlined with an incised line to give the appearance of a fold (<http://www.nps.gov/ocmu/Georgia.htm>; Williams and Thompson 1999:132-3).
- ◆ *Vining Simple Stamped*: lightly applied thin stamping, believed to have been done using an untwisted string wrapped paddle. Lands and grooves range from under 2 to over 5 mm in width, sometimes with both narrow and wide patterns on the same vessel. Vessel exteriors were stamped all over; stamping may be parallel or over stamped (Elliott and Wynn 1991; Williams and Thompson 1999:129)
- ◆ *Ocmulgee Cordmarked*: Ocmulgee I pottery is characterized by a temperless paste (although sand-tempering and/or clay/grog inclusions did occur), mostly folded rims, and mostly parallel vertical cord-marking; those sherds not parallel-stamped exhibited crisscrossed cordmarking. The average parallel-stamped Ocmulgee I sherd was 5.8 mm, while the crisscrossed stamped was 6.0 mm. Ocmulgee I ceramics are concentrated in the Abbeville area, and reach at least as far north as Hawkinsville, which was the northern limit of Snow's survey area. Ocmulgee II pottery, centered in the Jacksonville area, tends to have crisscrossed stamping, fewer folded rims, and a sand temper. Ocmulgee III pottery is found primarily in the Lumber City area, and is characterized by primarily unfolded rims, crisscrossing cord-marking, and grit tempering (Snow 1977a, 1977b). Snow (1977a:43) states that Ocmulgee III pottery is more similar to Savannah II Cordmarked pottery, via vessel shape and paste type.

Stemmed points continue from the Late Archaic period into the Early Woodland period, albeit somewhat smaller, but they generally fall out of favor during late Woodland times. A small stemmed type, Bakers Creek, is common in the Coastal Plain, and is often associated with Swift Creek materials; a date range of 2,000 – 1,500 YBP is estimated for this type (Whatley 2002). Stemless spike-like bifaces, known as Woodland Spikes or Swift Creek Spikes, often occur in association with late Swift Creek materials (Snow 1977; Whatley 2002). Also spike-like, but with a small stem, is a type referred to as Duval; these are estimated to date from 1,600 to 1,200 YBP (Whatley 2002:39). Snow (in Whatley 2002:39) posits an evolution from Bakers Creek to Duval to Swift Creek/Woodland Spike; Price (2003) corroborated this point sequence based on a study of data from the Swift Creek site located upriver near the Fall Line. Also found in Early and Middle Woodland contexts are large triangular points. The most common type in the project vicinity is known as Hernando, a large triangular point having basal notches resulting in a small stem which does not protrude beyond the shoulders (Snow 1977a; Whatley 2002). The Yadkin type, a large triangular point with a concave base, is common in the Piedmont, but is found infrequently in the Coastal Plain. By the Late Woodland period, small triangular points, believed to represent arrow points, were being produced; these continued to be made and used during the Mississippian period.

In the Coastal Plain, the Woodland ceramic sequence is somewhat patchy. The earliest Early Woodland (2,500 – 2,000 YBP) ceramic series is Refuge, with decorations including Plain, Punctated, Incised, and Simple Stamped. Refuge ceramics appear to have developed out of the preceding St. Simons fiber-tempered tradition along the lower Coastal Plain of Georgia and South Carolina. In the Big Bend region, Snow (1977a, 1977b) found them to be relatively uncommon, having recovered them from only a few sites along the Ocmulgee River; he believes they were probably contemporaneous with the Satilla series. Much more common in the project vicinity are linear check and check stamped, simple stamped, and plain wares of the Deptford series. Deptford Check Stamped may have antecedents in the earlier fiber and sand tempered (check-stamped) Satilla pottery (Elliott and Sassaman 1995). Snow (1977b) reports that sand-tempered Deptford-like pottery often appears on sites with Satilla pottery. Elliott and Sassaman (1995) state that check stamping does not predate 2,500 YBP, and most researchers believe it dates from the late Early Woodland into the Middle Woodland period. During survey and testing of the fishing lake, Benson et al. (2001) recovered one linear check stamped and two simple stamped sherds which were attributed to a Deptford occupation; no diagnostic Early Woodland lithics were recovered.

The Middle Woodland (2,000 – 1,500 YBP) period saw the emergence of the Swift Creek culture, identified by ornate curvilinear complicated stamped pottery. The Swift Creek peoples, centered in Georgia, eastern Alabama, and northern Florida, participated in a pan-regional Hopewellian ideological sphere encompassing most of the Midsouth and including Ohio, Indiana, and Illinois (Anderson 1998). The Swift Creek period began at approximately 1,900 YBP and lasted until 1,200 YBP (Stephenson et al. 2002), and it is generally divided into Early (c. 1,900 – 1,600 YBP) and Late (c. 1,600 – 1,200 YBP), based on pottery design and its frequency in relation to non-Swift Creek wares in ceramic assemblages. In the Big Bend area, Stephenson has obtained numerous radiocarbon dates for Swift Creek pottery; a few dates extend to approximately 1,150 YBP, with one as late as 1,050 YBP (Stephenson et al. 2002; Stephenson 2003 personal communication). Early Swift Creek pottery often occurs in association with Deptford ceramics, while Late Swift Creek pottery often occurs with Weeden Island pottery.

Weeden Island pottery types include Incised, Punctated, Plain, and Zoned Red; Weeden Island pottery is frequently found in association with Late Swift Creek, Keith Incised, and Carrabelle Punctated. The Weeden Island culture appears to have developed along the Gulf Coastal Plain, centered in Florida, and subsequently spread north and westward. Sites containing Weeden Island pottery are located in the project vicinity; in fact, several are found near the Stuckey Tract. These include the Shelley Mound Site (9PU3), located 4.7 km south on a ridge above the river in Pulaski County; Keelings Fish Camp (9HT14), approximately 5.5 km directly west across the river along Big Indian Creek; and 9PU57, located in the proposed fishing lake just to the south (Benson et al. 2001). The Weeden Island culture is believed to date from approximately 1,500 to 1,000 YBP.

A site with a significant Weeden Island component, the Shelley Mound Site (9PU3), was discovered by Bill Phillips and a co-worker with a surname of Shelley sometime in the 1960s. The site, which at the time of discovery was on Georgia Kraft Paper Company land, had recently been root raked. Phillips (personal communication 2003) indicated that Shelley believed that a possible mound was present, based on a raised area approximately 20 – 30 feet in diameter and 6 inches in height. Shelley returned shortly after the initial site discovery to dig in the mound, whereupon he encountered a human skull. He re-covered the skull and consulted archaeologists in Macon, who tested the site. According to Snow (2003 personal communication), the archaeologists were Jack Walker, Don Smith, and Woody Williams. Phillips stated that

the archaeologists encountered 11 burials and a cache of 60 Weeden Island pots on the east side of the mound. No documentation of the site has been published, and the materials are housed at the Antonio J. Waring Archaeological Laboratory at the State University of West Georgia in Carrollton (Mark Williams, personal communication 2003). Snow (2003 personal communication) related that there are two areas of the site, one an Etowah village at UTM E265115 and N3582010, and the other area, to the north across a gully at E265069 and N3582130, being the Weeden Island mound along with several shell middens.

Numerous significant Swift Creek sites are located both upstream and downstream from the Stuckey Tract, although in the Big Bend region, Snow (1977a, 1977b) found Late Swift Creek sites to be much more common than Early Swift Creek sites. For years, Snow (1975, 1998) has been documenting Swift Creek ceramic designs in the Ocmulgee Big Bend region, as well as other parts of the South. He believes that these designs are symbolic and abstract representations of cosmological and/or naturalistic iconography (Snow 1975, 1998). By mapping individual pottery design contacts among Swift Creek sites, he has been able to examine interaction among Swift Creek sites throughout Georgia and beyond (Snow 1977a, 1977b, 1998; Snow and Stephenson 1998; Stoltman and Snow 1998). For instance, almost half of the Swift Creek pottery designs from the Hartford Mound Site (9PU1) have been recorded at other sites (Snow and Stephenson 1998). Sites very near the project area, such as Westlake and 9PU3, also have design contacts with the Hartford Mound Site.

Recent investigation of ceramic sites in the Big Bend region (i.e., Stephenson 1988, 1990a, 1990b; Stephenson et al. 1990; Stephenson et al. 1991, 1996) has helped to refine the post-Swift Creek ceramic sequence of the area. Based on ceramic analysis, excavation data, and chronometric assays, Stephenson et al. (1996) posit the following sequence for the Big Bend region: the Late Woodland Ocmulgee Cordmarked tradition occurs from 1,150 to 750 YBP; from 725 to 650 YBP is the Pulaski phase of the Savannah period; the Pre-Square Ground Savannah/Lamar period occurs from 650 to 550 YBP; and Square Ground Lamar period dates from 550 to 400 YBP. Numerous types of Middle Woodland, Late Woodland, and Mississippian ceramics are found in the project vicinity, including Late Swift Creek, Weeden Island, Napier, Ocmulgee, Vining, Etowah, and Savannah.

Downstream in the Big Bend area, cordmarked pottery appears to be the dominant ware during the Late Woodland period (1,150 – 750 YBP). Cordmarked pottery in the area is

very common, having occurred on 58% of the sites Snow (1977a, 1977b) recorded. In a study of the Woodland period in the Georgia Coastal Plain, Steinen (1995) relates that surface collections from 58 sites in the area between Hawkinsville and Warner Robbins (i.e., the project vicinity) are overwhelmingly dominated by cordmarked and plain pottery. Using the Big Bend data, Snow (1977a) defined the Ocmulgee Series of cordmarked pottery, which is believed to be a separate type from both Wilmington and Savannah cord marked wares. He divided the series into three variants, I, II, and III, based on differences in rim shape, cord-marking configuration, and geographical occurrence.

Steinen (1995) postulates that peoples producing cordmarked pottery occupied the Ocmulgee River basin during the Middle Woodland, prior to and during the complicated-stamped Swift Creek tradition. At the Hartford Mound Site, cordmarked pottery occurred stratigraphically below Swift Creek pottery (Snow and Stephenson 1990); Bracken et al. (1986) found that Ocmulgee Cordmarked pottery pre-dates Swift Creek pottery along the lower Ocmulgee River. However, it appears that the peak of the cord-marking tradition along the lower Ocmulgee occurred after the Swift Creek period. Numerous radiocarbon assays of Swift Creek and Cordmarked components at sites along the lower Ocmulgee bear this out (Stephenson, personal communication 2003). As a result of testing at 13 sites in the Big Bend region, Stephenson (1988, 1990a) found evidence for cordmarked pottery post-dating Swift Creek. At 9DG9, where cordmarked and Late Swift Creek ceramics were found together in a 30 cm-thick midden, analysis showed that the cordmarked component overlay the Late Swift Creek component. This same study also found cordmarked pottery in association with Napier ceramics, which are estimated to range from 1,300 to 900 YBP (Stephenson 1988, 1990a); the Napier range overlaps with, yet slightly pre-dates, the Late Woodland Ocmulgee Cordmarked phase defined by Stephenson et al. (1996). Additional evidence that cordmarked pottery in the area dates primarily to the Late Woodland period is its frequent association with small triangular points.

There is evidence from sites in Henry County in the Piedmont that individual potters may have produced both Napier and Swift Creek designs, suggesting a close affiliation between these two traditions, as well as a close association with Vining (Espenshade et al. 1998). In addition to Napier, Vining Simple Stamped and a single Averett Incised sherd have been reported from 9PU57 located in the proposed fishing lake just to the south of the project area (Gresham 1999; Benson et al. 2001). First identified by Chase (1959, 1962) in the mid-1950s, Averett ceramics are frequently found in the

middle Chattahoochee River Valley; subsequent work has firmly dated these wares from 1,100 to 700 YBP (Ledbetter 1995). The date range of Vining Simple Stamped pottery is estimated from 1,200 to 800 YBP (Elliott and Wynn 1991), roughly mirroring the Late Woodland Ocmulgee Cordmarked phase defined by Stephenson et al. (1996).

The chronological placement and cultural affiliation of simple stamped ceramics in Georgia has been fuzzy for many years. The primary source of confusion over the temporal position of [sand/grit tempered] simple stamped ceramics stems from W.P.A. era excavations in the central Georgia area. Arthur Kelly (1938) defined the Vining Simple Stamped pottery type (originally referred to as Sigma Class) in 1938 based on work he conducted at the Vining Site in Putnam County and other sites in the area. He noted the association of Vining Simple Stamped with Napier (Delta Class) materials at Macon Plateau and Brown's Mount, and originally placed it temporally between Swift Creek and Lamar. Finally, however, he placed both Vining and Napier prior to Swift Creek.

Around the same time, work at the Mossy Oak Site in the Macon area by both Kelly and Gordon Willey revealed simple stamped pottery stratigraphically below Lamar materials (Fairbanks 1952). Partially because of the 'simple' nature of the decoration and partially because researchers of the period used the ceramic sequences of the coast and northwest Georgia to fill in gaps of the central Georgia sequence (Elliott and Wynn 1988, 1991), the simple stamped materials at Mossy Oak were assigned to the Early Woodland period and named after the site. Although Fairbanks (1952) stated that the Lamar and simple stamped materials at Mossy Oak were separated by sterile strata, Padgett's (1980) reanalysis indicated that these materials overlapped. An investigation by Stoutamire et al. (1977) at Mossy Oak did not firmly place the simple stamped wares chronologically.

Simple stamped ceramics are known to have been produced throughout most of the state, and throughout most of the prehistoric ceramic-making era. Simple stamping is found occasionally on fiber and fiber/sand/grit tempered wares which date to the Late Archaic period (Elliott and Sassaman 1995; Snow 1977a); within the Early Woodland Refuge series (DePratter 1976, 1991); as a primary decorative type of the Early-Middle Woodland Deptford and Cartersville Series; on 17<sup>th</sup> century Altamaha Series pottery (Caldwell 1969) centered on the coast; on 18<sup>th</sup> and 19<sup>th</sup> century Historic Cherokee Galt pottery in the Allatoona area (Caldwell n.d.); on Late Mississippian and Historic Cherokee Qualla and Overhill wares (Broyles 1967; Keel 1976); and on Late Woodland wares, mostly referred to as Vining Simple Stamped (Elliott and Wynn

1988, 1991; Espenshade et al. 1998; Meyers et al. 1996, 1999; Pluckhahn 1997; Worth 1996; Worth and Duke 1991).

However, recent research (e.g., Anderson and Joseph 1988; Elliott and Wynn 1988, 1991; Espenshade et al. 1998; Gougeon 1996; Meyers et al. 1999; Pluckhahn 1997; Williams 1990; Worth 1996; Worth and Duke 1991) has begun to reconstruct a Late Woodland/Early Mississippian simple stamping tradition in Georgia. Anderson (1985, 1989) makes a case for a Late Woodland horizon marked by the production of plain, simple stamped, and brushed wares in portions of South Carolina, eastern Georgia, and western North Carolina. Based on Vining sites within the Oconee National Forest, Elliott and Wynn (1988, 1991) suggested that the Vining Simple Stamped tradition occurred between 800 and 1200 A.D., and more specifically between 950 and 1150 A.D. At the Raccoon Ridge Site in Morgan County near the Oconee River, Worth (1996) acquired OCR absolute dates for the Vining component, situating it between 1015 and 1205 A.D. In the Chattahoochee River Valley at the Carmouche Site on Fort Benning, Gresham et al. (1985) found that over 75% of the simple stamped sherds were found in the first three levels, where most of the Mississippian period material is located. The overwhelming evidence of the chronological position of this simple stamped ware has made the Mossy Oak ceramic type name obsolete, and has led to the preferred type name of Vining (see Williams and Thompson 1999:81-82).

Downstream from the Stuckey Tract, Stephenson et al. (1996:11) report 'Ocmulgee Simple Stamped' sherds as comprising 15% of the South Georgia College ceramic assemblage from the Georgia Kraft No. 1 Site (WGC 1479), located on the OWMA roughly between the Stuckey Tract and Hawkinsville. This site contains numerous Etowah Complicated Stamped and sand tempered plain sherds, as well as minor amounts of cord-marked, cob impressed, punctated/incised, and check stamped sherds (Stephenson et al. 1996:11). In the Big Bend area, Stephenson (2003 personal communication) acquired a radiocarbon date of 1024–1160 A.D. for a simple stamped sherd (classified as Ocmulgee Simple Stamped rather than Vining) from a site (9JD38) in Jeff Davis County. This indicates the possibility that some of the other simple stamped sherds reported from the Big Bend study area (Snow 1977a, 1977b) may be contemporaneous with the Vining complex.

Indeed, prior to the present knowledge of a Late Woodland simple stamped tradition, Snow (1977a, 1977b) generally identified such ceramics as Deptford/Mossy Oak at numerous sites in the Big Bend area. In the 2002 Georgia Archaeological Site Files Database, all but one of these sites also con-

tained a Deptford component. Snow (1977a:19) notes that the Big Bend area "seems to have been controlled by simple stamped pottery users." He found that on such sites, simple stamped sherds always outnumber check stamped sherds. Furthermore, simple stamped pottery with tetrapodal supports is usually parallel stamped, rather than over stamped. Noting the spatial and density differences between sites with simple stamped and check stamped wares, Snow (1977a:18) asks: "Is early Woodland simple stamped not really Deptford after all, but Mossy Oak or Vining Simple Stamped, with trade relations with coastal Deptford?" Given the present state of knowledge concerning the chronological positioning of Vining culture, the question now becomes: what are the differences between Late Woodland Mossy Oak/Vining and Early-Middle Woodland Deptford simple stamped wares in the area? Snow (personal communication 2003) states that folded rims are often found on the Vining-like wares, whereas Deptford Simple Stamped ceramics never exhibit folded rims, but frequently have outward flaring rims. He also feels that the simple impressions are distinguishable between the two types in some, but not all, cases. Of course, the ability to distinguish between these two wares is a requisite for the study of either tradition.

Just a few hundred meters to the south of the Stuckey Tract in the Public Fishing Lake project area, Phase I (Gresham 1999), II (Benson et al. 2001), and III (report in progress) investigations have revealed the presence of Vining Simple Stamped, but nowhere near the degree to which it occurs in the Stuckey Tract. All the available data from the region indicates that Vining peoples were present in the Lower Ocmulgee River Valley, but did not constitute a significant population. The core area of the Vining culture appears to have been the central area of the state, extending well into both the lower Piedmont and the interior Coastal Plain.

The Tarver Site, located upstream at the Fall Line approximately 10 km northwest of the Macon Plateau Site on a ridge above the confluence of the Ocmulgee River and Town Creek, contains a significant Vining Simple Stamped component (Pluckhahn 1997). Analysis of the ceramics from the site revealed the presence of several Late Woodland/Mississippian wares, including Napier, Woodstock, Averett, Etowah, and, most significantly, the local Macon Plateau ware, Bibb Plain. Indeed, the temper and color of the paste of a few of the ceramic vessels from Tarver is similar to Macon Plateau pottery (Pluckhahn 1997). Two radiocarbon dates from features containing Vining materials overlapped (at two sigma probability) from 985 to 1170 A.D. (Pluckhahn 1997). In an examination of data outlined by Mason (1963) from the Macon Plateau Site, Pluckhahn (1997) found a strong association



between simple stamped and Mississippian pottery, with these wares co-occurring in many features; other Macon Plateau artifact assemblages from the area contain simple stamped pottery as well. All of this leads Pluckhahn (1997) to suggest that the traditional picture of the Mississippian peoples who settled at the Fall Line in the Macon area as solitary and reclusive (see Fairbanks 1954; Hally and Rudolph 1986) may no longer be valid. Rather, he believes that interaction between the Macon Plateau peoples and those producing Vining simple stamped pottery was much more common than is generally believed. The co-occurrence of Macon Plateau and Vining materials can be explained via trade, or more likely, intermarriage.

The Ocmulgee Fall Line area also holds numerous significant Mississippian sites, the most prominent of which is the Macon Plateau Site (now known as the Ocmulgee National Monument). This site appears to represent the village and mound center of an intrusive culture which was believed to have originated from the Mississippi River Valley (hence the term Mississippian) or perhaps the Hiawassee Island culture in Tennessee (Kelly 1938; Fairbanks 1952, 1956; Willey 1939, 1953; Hally and Rudolph 1986; <http://www.nps.gov/ocmu/Macon-Plateau.htm>). Arriving at approximately 900 A.D., the Macon Plateau culture, named for the environmental feature on which they settled, brought with them an intensive agricultural system based primarily on the production of maize. Some researchers (e.g., Smith 1984) question the site unit intrusion theory, instead suggesting that the 'Mississippianization' may actually be a local cultural development.

To the south, at Coastal Plain sites along the Ocmulgee River, Schnell and Wright (1993) suggest that the persistence of cordmarked ceramics and the scant evidence of an agricultural economy indicate the continuity of (Late) Woodland traditions when neighboring populations were adopting Early Mississippian traits. Indeed, Stephenson et al. (1996) cite radiocarbon data indicating that the cord-marking tradition continued along the lower Ocmulgee River well into the thirteenth century A.D. They postulate that the reasons for the Woodland persistence are sociopolitical and environmental. As Larson (1980) describes, the acidic sandy upland soils and the frequently-flooded bottomlands characterizing the area are not favorable to agriculture. Stephenson et al. (1996) argue that the Mississippian riverine-oriented subsistence economy was essentially ineffective in the area, the politics were unstable, and the area was marginal to the more stable and established Mississippian societies. These factors worked together to hinder Mississippian occupation of the region, so that the full-blown Middle Mississippian manifes-

tations found in surrounding areas were not as well-developed in the project vicinity, and were relatively short-lived.

This is not to say that Mississippian peoples did not occupy the area at all. Stephenson et al. (1996) identified three primary Middle Mississippian centers and numerous farmsteads in the Big Bend region. Two of the primary centers are located in Pulaski County: the Sandy Hammock Site (9PU10) and the Georgia Kraft No. 1 Site (9PU21), while the third (Lind Landing, 9WL7) is located near the confluence with the Oconee River in Wheeler County. [Based on the Georgia Archaeological Site Files Database and the location provided in Stephenson et al. (1996), there are two different 9PU21 sites. The site files database locates the site at UTM E270640 N3569250, which places it south of Hawkinsville near the confluence of Big Creek with the west side of the Ocmulgee River; the site is listed as a small unknown prehistoric lithic scatter, recorded in 1998 by the University of Georgia. 9PU21 as provided by Stephenson et al. (1996), at UTM E265570 N3579955, places the site north of Hawkinsville above the confluence of Carden Creek with the east side of the river; they indicate that the site was documented in the 1980s by Steinen (1986; n.d). As mentioned previously, Steinen apparently did not record the sites he found in the state site files, and 9PU21 may simply represent an institutional or field site number. Nevertheless, the northern location of the site is the one to which Stephenson et al. (1996) are referring]. At the three primary sites, Etowah Complicated Stamped and Savannah Complicated Stamped pottery occur in association (Stephenson et al. 1991, 1996). The Sandy Hammock Site contains a single Savannah period platform mound, estimated to have been constructed sometime between 800 and 700 YBP; a midden dating to this period was recorded approximately 70 m from the mound. This site is interpreted as the center of a small polity, similar to those found on major drainages to the east and west, while the other two sites may have functioned similarly (Stephenson et al. 1990, 1996). The small Mississippian sites dispersed around the centers are located in the uplands adjacent to floodplains or on elevated spots in the floodplain; these are thought to represent farmsteads where maize agriculture was practiced on the high areas (Stephenson et al. 1996).

Mississippian ceramics which are found in the project vicinity include:

- ◆ *Etowah Complicated Stamped*: wide variety of designs, with diamonds predominant. Designs include nested diamonds, lined-blocks, fillet crosses, and nested squares; variations upon these designs are common. Stamping is generally fine-lined and well

executed (Wauchope 1966:65-8; Williams and Thompson 1999:42-3).

- ◆ *Savannah Complicated Stamped*: designs typically curvilinear and include figure eight, concentric circles, a single terminal element of the figure eight, concentric circles with a cross in the center, nested squares or diamonds, often with a cross through them; careless overstacking often occurs. Lands and grooves typically much wider than Etowah Complicated Stamped. The rims are often straight to flaring, and occasionally everted (Wauchope 1966:77-9; Williams and Thompson 1999:108)

The ceramic assemblage at the Sandy Hammock Site is very similar to Etowah assemblages from north of the Fall Line. The site yielded Etowah and Savannah Complicated Stamped, Mississippi Check Stamped, and sand tempered plain. A small percentage of the sherds exhibit red filming on the lip, interior, and infrequently the exterior of bowls; brushing on vessel exteriors; and corncob impressions on the neck of flaring rim jars. Based on these data, Stephenson et al. (1996) defined the Middle Mississippian Pulaski phase of the Savannah Period, which dates from 725 to 650 YBP. The Pulaski phase has the following characteristics: ceramic assemblages are dominated by sand-tempered plain vessels; Etowah Complicated Stamped is the predominant decorated ware; Savannah Complicated Stamped is present in low frequencies; check-stamped wares occur at various frequencies; cob-impressed and brushed wares are minority types; red filming occurs on bowls only, particularly the lip, interior and sometimes the exterior rim of plain and complicated stamped wares; vessel paste is homogenous fine sand temper; and cordmarked and simple stamped vessels are absent (Stephenson et al. 1996).

The Pre-Square Ground phase of the Savannah/Lamar period developed out of the preceding Pulaski phase, and dates from 650 to 550 YBP (Stephenson et al. 1996). Ceramic jars from this period typically exhibit the filfot cross design, while bowls are usually undecorated. On incised ceramics, three or four lines were used, compared to a larger number for the later Square Ground pottery. Hollow reed punctations are occasionally observed on the incised pottery. In addition, Savannah Complicated Stamped pottery occurs in low frequencies in the ceramic assemblages from this period (Snow 1990).

The Square Ground phase of the Lamar period dates from 550 to 400 YBP (Stephenson et al. 1996). The phase takes its name from the dominant ceramic motif, which is similar to the

“square ground” layout of historic Indian villages described by William Bartram. This ceramic design consists of a central dot which may stand alone or have concentric circles around it; four lines radiate in the cardinal directions from the dot, and the quadrants formed by these lines are usually filled with chevrons (Snow 1990).

Both Pre-Square Ground phase and Square Ground phase sites are relatively uncommon in the project vicinity. The state site files list three Late Mississippian Lamar period sites in the area, one in Pulaski County (9PU13) and two in Dodge County (9DG7 and 9DG22); no sites of this period have been recorded in Bleckley County. Recent investigations at the proposed fishing lake (Gresham 1999; Benson et al. 2001) just to the south of the current project area failed to locate any Pre-Square Ground or Square Ground components. A concentration of Square Ground phase sites occurs downstream in the lower Ocmulgee Big Bend and upper Satilla River basin (Snow 1990), while Lamar sites are also common upstream in the Fall Line area.

In A.D. 1540, a Spanish expedition led by Hernando de Soto entered Georgia from Tallahassee, Florida, ventured up the Flint River to the vicinity of present-day Montezuma, headed east toward the Ocmulgee River and Stuckey Tract, probably crossing Big Indian Creek near present-day Perry (Hudson et al. 1984; Hudson 1994; Braley 1995). They almost certainly were following Indian trails. One of these trails ran northeast from near present-day Unadilla in Dooly County to cross the Ocmulgee River in the vicinity of the small community of present-day Westlake, which is approximately 5.5 km (3.5 miles) north of the Stuckey Tract (Hemperly 1989). Another of these trails ran from the vicinity of Unadilla east to near Hawkinsville, where it crossed the Ocmulgee River and turned toward Cochran. Hudson et al. (1984) believe that the entrada reached the Ocmulgee River near Westlake, just upriver from the Stuckey Tract, where they encountered a village located on an island in the Ocmulgee. The village apparently was under the political control of the Ichisi chiefdom, which was centered upstream near Macon. From here, the entrada followed the west bank of the river toward the Ichisi capital, which is believed to be at the Lamar Site (9BI2) in Bibb County (Hudson et al. 1984; Hudson 1994).

The time period following the Spanish incursion into the project area is known as the Historic Indian period, dating from the time of European contact at A.D. 1540 until the removal of the Native Americans from Georgia in 1838. Archaeological evidence for Historic Indian occupation of the project vicinity is non-existent. Subsequent to the de Soto incursion, the Indian polities in the region, including the Ichisi

polity, disintegrated, and the area appears to have been largely abandoned for nearly 150 years (Braley 1995). European disease likely had devastating consequences for native populations, disrupting social groups and alliances. However, small settlements of Indians may have remained in the Fall Line area near Macon (Smith 1994).

To the south in the panhandle of Florida and along the Georgia and South Carolina coast, numerous Spanish Catholic missions were established during the first half of the seventeenth century. The English established Charles Town (Charleston) in 1670, attempting to wrest political and economic control of the region from Spain. In the late 1600s, English traders established a trading post at the Macon Plateau Site near Macon, referring to the Indians in this area as Creeks. Raids by coalitions of Indians and the English caused the Spanish to abandon many of their missions and retreat to St. Augustine. Based in Charleston, the English established widespread trading networks with the Indians, trading in deer-skins, furs, weapons, and slaves. In an attempt to maintain control, the Spanish burned several Indian towns along the Chattahoochee River in 1685, and subsequently built Fort Apalachicola south of present-day Columbus. As a result, many of the Indians migrated to the Fall Line area of the Ocmulgee River, closer to English traders and the protection they provided. However, unfair trading practices and enslavement of Indians on the part of the English eventually caused the Indians to revolt, leading to the Yamasee War in 1715. A large coalition of Indian groups attacked English settlements around Charleston. The English chased the Indians back to the Ocmulgee River, forcing them to abandon these settlements and continue further westward to the middle and lower Chattahoochee River Valley (Braley 1995).

Euroamerican settlement expansion and tensions between settlers and the Creek Indians during the following decades led to cession of the area within Bleckley and Pulaski counties by the Creek Indians in treaties in 1805 and 1821 (Braley 1995). Pulaski County was created in 1808 from these lands, while Bleckley County was formed in 1912 from portions of

Pulaski and Laurens counties. Bleckley County was named after Logan E. Bleckley of the Georgia Supreme Court. Cochran, the county seat, was incorporated in 1869 (<http://www.rootsweb.com/~gableckl/history.htm>).

The construction of railroads in the vicinity in the late 1800s facilitated large-scale logging, and, with the exception of isolated patches, the area was cleared of timber. Along with silviculture, the production of turpentine from pine tree sap was an important industry. In a relatively short period of time, the logging boom ended, since no large stands were left to cut, and agriculture became the primary economic pursuit. During the late 1800s and early 1900s, cotton became the principle cash crop, with vast tracts of land devoted to its production. However, the combination of intensive large-scale agricultural production along with poor farming practices led to widespread erosion and fertility depletion of the topsoils. The arrival of the cotton boll weevil circa 1917 ended the widespread cotton farming industry.

Based on the aerial photographs (1937, 1949, 1964) and the 1974 Westlake topographic map, the non-forested open areas shown on the map in the northern portion of the Stuckey Tract served as agricultural fields from at least 1937 until approximately 1975. Presently, these old fields are planted in pines, which are approximately 30 years in age. The aerial photographs indicate that, prior to the clearcutting in recent years, most of the remaining areas within the Stuckey Tract were wooded, from at least 1937. Given that the trees observable in the 1937 aerial photographs are at least 25 to 30 years in age, it is likely that this area was logged only once prior to the recent logging, during the initial logging activity of the late 1800s or early 1900s. Numerous pine stumps from the recent logging observed during the field survey were of sizes that suggest an age range from approximately 80 to over 100 years, supporting this conclusion. Thus, it seems that the Stuckey Tract was logged twice.



# Chapter 3. Overview of Prehistoric Sites

The survey identified 44 archaeological sites and 10 isolated artifact finds within the Stuckey Tract; 43 of the sites and 9 of the isolated finds yielded prehistoric remains (Table 1; Figure 8). Site density in the project area is high, with many of the sites covering numerous acres. Remains from the Early Archaic, pre-ceramic and ceramic Late Archaic, Early Woodland, Middle Woodland, Late Woodland/Early Mississippian, and Middle Mississippian periods were identified. This chapter provides a general overview of the prehistoric resources identified within the Stuckey Tract and a context for their interpretation.

In order to locate the archaeological resources within the Stuckey Tract, we employed a flexible systematic survey strategy. Figure 9 shows the location of the shovel tests and inspection points within the tract which were recorded using GPS units. During the survey, each crew member carried a handheld GPS unit, and marked the location of each of their shovel tests and inspection points, as well as chert outcrops. There are two main reasons why GPS waypoints are absent in some areas of the figure. First, occasionally shovel test locations simply could not be recorded with GPS because of the lack of satellite coverage. This was primarily a problem in areas where there was a dense vegetative canopy, such as the bottomland floodplain in the northern portion of the project area. Second, areas of deep water where the ground surface was not visible were not traversed. At the time of the survey (March – April 2003), the ground was extremely saturated, and the bottomlands were mostly covered with water. We traversed many areas of standing pools of water up to our knees, but stopped at areas with moving and murky water of unknown depth. For instance, in the northwest portion of the tract, the large area bordering the river and bounded by the uplands and an old river meander scar was not investigated, since the meander scar was full of moving water and effectively isolated this area of floodplain. Thus, large portions of the floodplain were not shovel tested. Conversely, all of the uplands within the tract were covered at 30 m intervals. The nearly full coverage of the tract and the linkage of artifact data to georeferenced (GPS-recorded) locations facilitates a detailed study of the land use history.

In order to provide a background for the interpretation of the prehistoric archeological record we have recorded within the Stuckey Tract, it is necessary to discuss the theoretical underpinning of this research. Specifically, the overarching theoretical paradigm guiding this research is generally referred to as “human ecology” or “evolutionary ecology” (Bettinger 1991; Butzer 1982). At the core of human ecology is the issue of how human beings adapt to their particular environment. Behavioral models detailing the spatial patterning of humans over the landscape are predicated on the idea that human foraging behavior, measured largely by the degree of mobility, is heavily influenced by the resource structure of the environment (Binford 1978, 1979, 1980; Kelly 1983; Winterhalder 1994).

Binford’s (1980) model of archeological site types accounts for the variation and patterning observed in the archaeological record of hunter-gatherers via the creation of linkages between site type/function and the corresponding archeological remains. This model relates subsistence-settlement systems to environmental variables, specifically to those of resource location and availability. Linking mobility strategies, technological strategies, and tool assemblage formation, the model divides hunter-gatherer mobility into two basic types of adaptive systems or strategies: foraging and collecting.

The foraging strategy, which is characterized by seasonal residential moves among resource patches, is designed to take advantage of the seasonal variation in resources in a given geographical range. Typically, foragers range out from the residential (base) camp during the day to gather resources, and return to the base camp in the afternoon or evening. Foragers typically do not store foods, but rather gather them daily. Variability in the number of residential moves per year, as well as in the size of the mobile groups, is due in large part to the environmental resource structure. In areas with large or homogenous resource locations, residential mobility may be relatively high but the distances between residential locations may be small, whereas in areas with sparse and scattered resources, the size of the mobile group may be de-

Table 1. Prehistoric Cultural Resource Summary.

Cultural Resource	Site Size (m)/orientation	Site Type	Temporal Affiliation
9BY35	550x150/NW-SE	Lithic quarry and artifact scatter	Late Woodland
9BY36	65x35m/NE-SW	Artifact scatter	Woodland/Mississippian
9BY37	765x435/NW-SE	Lithic quarry and artifact scatter	Possible Early Archaic; Late Archaic; Woodland/Mississippian
9BY38	210x85/N-S	Artifact scatter	Woodland/Mississippian
9BY39	30x15/NE-SW	Lithic quarry	Unknown prehistoric
9BY40	120x25/NW-SE	Lithic scatter	Unknown prehistoric
9BY41	320x95/NW-SE	Lithic scatter	Late Archaic
9BY42	104x28/N-S	Lithic scatter	Unknown prehistoric
9BY43	760x130/E-W	Lithic quarry and artifact scatter	Early - Middle Woodland; Woodland/Mississippian
9BY44	215x90/E-W	Lithic scatter	Unknown prehistoric
9BY45	320x130/E-W	Artifact scatter	Late Woodland
9BY46	30x15/N-S	Artifact scatter	Woodland/Mississippian; possible Late Archaic
9BY48	60x20/N-S	Artifact scatter	Unknown prehistoric
9BY49	30x15/E-W	Artifact scatter	Woodland/Mississippian
9BY50	65x20/E-W	Artifact scatter	Unknown prehistoric
9BY51	550x500/E-W	Village & possible mound	Early Archaic, Late Archaic, Early Woodland – Middle Mississippian
9BY52	140x70/NE-SW	Artifact scatter	Woodland/Mississippian
9BY53	330x185/N-S	Artifact scatter	Woodland/Mississippian
9BY54	75x15/E-W	Artifact scatter	Late Woodland
9BY55	155x60/N-S	Lithic quarry	Early Woodland
9BY56	215x65/NW-SE	Lithic reduction and artifact scatter	Terminal Late Archaic; Woodland/Mississippian
9BY57	270x145/NE-SW	Artifact scatter	Terminal Late Archaic; Woodland/Mississippian; Late Woodland
9BY58	30x15/N-S	Artifact scatter	Late Woodland
9BY59	110x75/N-S	Lithic scatter	Unknown prehistoric
9BY60	480x25/N-S	Artifact scatter	Late Woodland; Woodland/Mississippian
9BY61	80x50/N-S	Lithic scatter	Unknown prehistoric
9BY62	105x30/NE-SW	Lithic scatter	Unknown prehistoric
9BY63	90x25/N-S	Artifact scatter	Late Woodland
9BY64	75x60/NW-SE	Lithic scatter	Unknown prehistoric
9BY65	300x245/N-S	Lithic quarry/artifact scatter	Late Early Archaic; Late Woodland
9BY66	90x60/NW-SE	Artifact scatter	Woodland/Mississippian
9BY67	75x40/E-W	Lithic quarry	Unknown prehistoric
9BY68	265x75/NE-SW	Artifact scatter	Woodland/Mississippian
9BY69	85x55/E-W	Lithic scatter	Late Early Archaic
9BY70	120x75/NW-SE	Artifact scatter	Unknown prehistoric
9BY71	250x90/E-W	Artifact scatter	Late Woodland
9BY72	115x55/E-W	Lithic scatter	Unknown prehistoric
9BY73	50x25/E-W	Artifact scatter	Unknown prehistoric
9BY74	90x20/E-W	Lithic scatter	Unknown prehistoric
9BY75	85x35/N-S	Lithic scatter	Unknown prehistoric
9BY76	35x20/NW-SE	Ceramic scatter	Woodland/Mississippian
9BY77	95x35/N-S	Artifact scatter	Woodland/Mississippian
9BY78	370x260/E-W	Artifact scatter	Middle Woodland; Late Woodland; possible Mississippian
IF B283Z	15x15/Round	Isolated Find	Late Woodland
IF D89Z	15x15/Round	Isolated Find	Unknown prehistoric
IF F115Z	15x15/Round	Isolated Find	Unknown prehistoric
IF F394Z	15x15/Round	Isolated Find	Unknown prehistoric
IF F574Z	15x15/Round	Isolated Find	Unknown prehistoric
IF G38Z	15x15/Round	Isolated Find	Unknown prehistoric
IF G48Z	15x15/Round	Isolated Find	Unknown prehistoric
IF G99Z	15x15/Round	Isolated Find	Unknown prehistoric
IF G121Z	15x15/Round	Isolated Find	Late Woodland – Mississippian

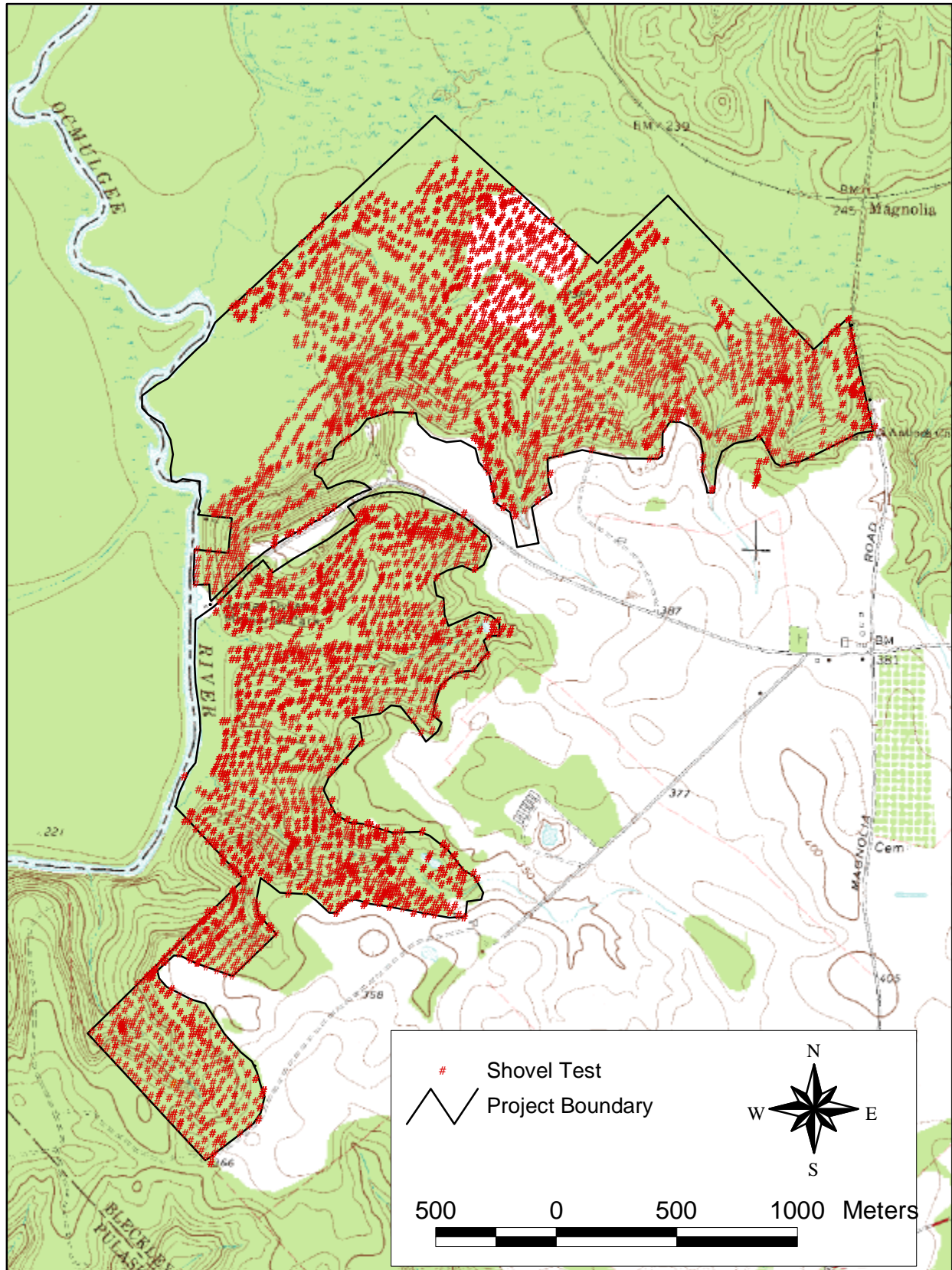


Figure 8. Location of Shovel Tests and Surface Inspection Points.



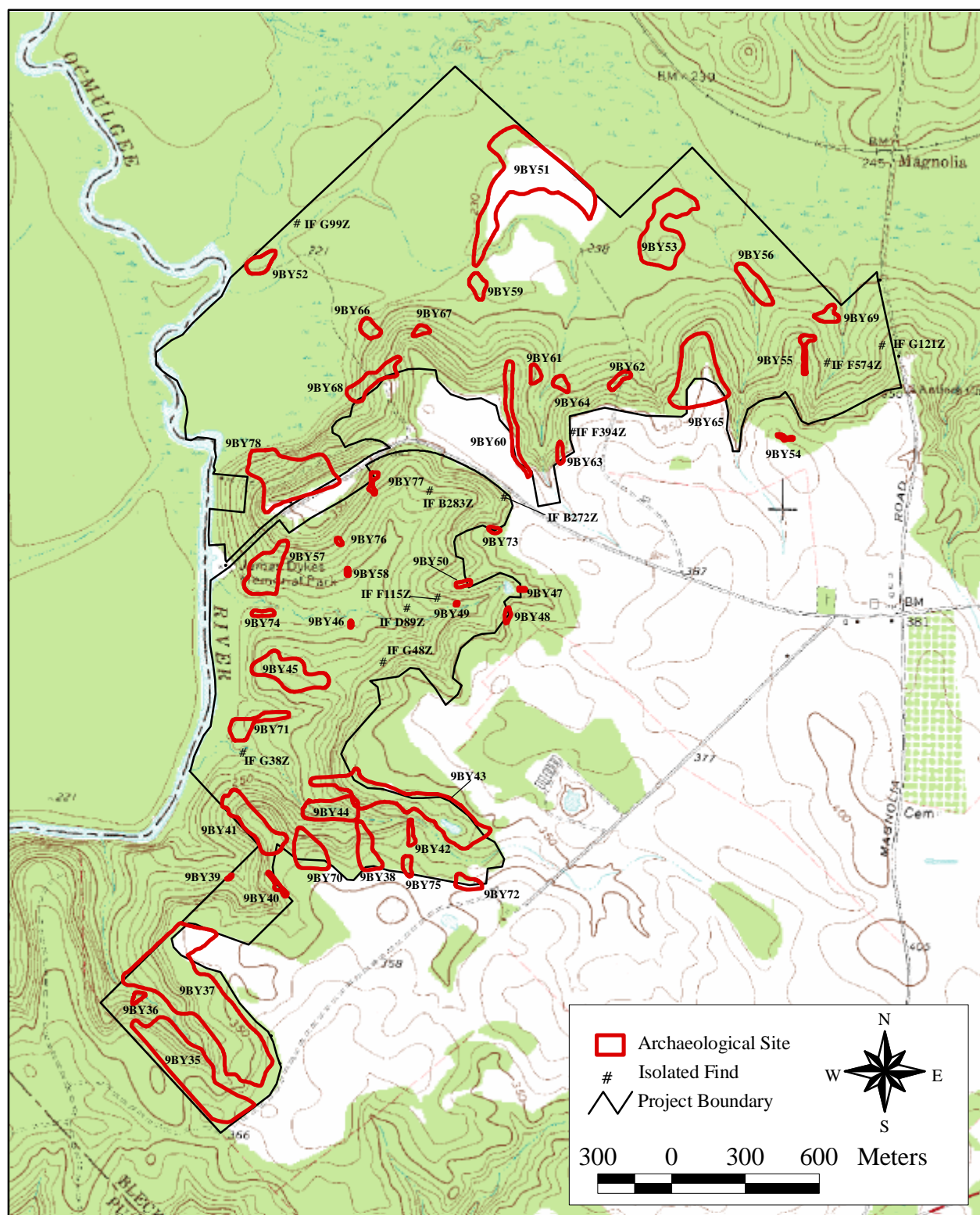


Figure 9. Location of Prehistoric Cultural Resources Identified During the Survey.



creased and the foraging radius may be increased (Binford 1980:339).

In terms of the archaeological record, two basic site types are created within a foraging system: a residential base and a location. A residential base is the “hub of subsistence activities, the locus out of which foraging parties originate and where most processing, manufacturing, and maintenance activities take place” (Binford 1980:343). Spacing and duration of mobility, as well as group size, are important factors in the character of the archaeological record of a residential base. In general, in areas where critical resources are discretely situated or restricted, there is a relatively high rate of redundancy in the use of particular sites, and thus a greater archaeological visibility. Variation in the archaeological records of different residential sites reflects the length of occupation and the seasonal schedule of the inhabitants (Binford 1980:343).

The other foraging site type, a location, is a short-term special-purpose locus where extractive tasks were carried out. Because tasks at locations are typically low bulk procurement activities, these sites are generally characterized by low artifact densities (with relatively few, if any, tools), and low archaeological visibilities (Binford 1980:343-44).

In contrast to the foraging system, the collecting system is characterized by logistical mobility patterns designed to collect resources, as well as the storage of food for at least some part of the year. Logistical strategies are designed to accommodate incongruent distributions of resources or overcome conditions which restrict mobility. With this strategy, collectors move themselves from the residential (base) camp to specific resource locations, thereby creating special-activity sites; in comparison to foragers, collectors have less residential mobility (Binford 1980).

In addition to the residential and location site types produced by foragers, collectors produce three additional site types: the field camp, the station, and the cache (Binford 1980:346). A field camp is a temporary operational center for a task group, where a group camps and performs maintenance activities while away from the residential base. Variation observed in the archaeological records of different field camps reflects the differential nature of the group’s target activities. A station is a site where information-gathering by a special-purpose task group occurs (e.g., monitoring of game), while a cache is a site where either critical or large bulk resources are stored; a cache is often coterminous with a residential site. Both the station and the cache generally have low archaeological visibilities (Binford 1980:346).

Of course, these site types are not mutually exclusive in terms of the archaeological record, as many different combinations of these patterns may obtain within the foraging and the collecting systems, thus adding to the variation observed in the archaeological record. Furthermore, logistical mobility and residential mobility systems are not mutually exclusive, but rather are alternatives on “opposite ends of a continuum” (Carr 1994:35-36). Seasonally and annually changing resource compositions caused by environmental fluctuation(s) result in the mixing of the organizational systems, so that a given hunter-gatherer group adopts different mobility strategies from year to year. Indeed, as hunter-gatherers use a variety of strategies to accommodate these fluctuations, the entire range of such strategies emerges only after a long period of time (Kelly 1983:301).

In terms of the Stuckey Tract, the archaeological record appears to contain most, if not all, of the site types discussed above, including short-term limited-activity loci, chert quarries, a cache, field camps, residential loci, as well as a possible mound site. While survey data do provide a small window into site function(s), it is difficult and imprudent to categorize a given site so specifically based on such a small sample of data. For this reason, we have employed the more generic and broad site types commonly used to characterize prehistoric sites in the Southeast: residential location, quarry, and hunting/extraction locus. We also use the umbrella phrases “lithic scatter” and “artifact scatter” for descriptive purposes, although both phrases have little value in terms of inferring human behavioral patterns.

Reasonably, sites with high archaeological visibilities are generally easier to categorize than those with low visibilities. Quarries are relatively easy to identify for the obvious reasons: the presence of both raw lithic material and the residue remaining from procurement/reduction activities. Dense artifact concentrations, high artifact diversity, and discrete activity areas are typically indicative of a residential location. Sites with lower archaeological visibilities, that is, sites with low artifact densities and diversities, are harder to categorize at this level of analysis due to problems of equifinality. For example, a small lithic scatter with no diagnostic artifacts may represent the remains of a hunting camp, a short-term field camp, or an information-gathering (e.g., game-monitoring) station. Additionally, repeated use of the location, whether by the same group for the same purpose(s) or by disparate groups for disparate purposes, complicates the archaeological record and our interpretation of that record. Such a site, while not as exciting to investigate as a residential or quarry site, nevertheless represents an integral component of a settlement/land-use system, and requires equal consideration.

While site descriptions for each site recorded in the Stuckey Tract are not presented here (see the companion technical volume), several of the sites are discussed below in order to give a sense of the types of resources which are present.

**9BY37** is an extensive prehistoric artifact scatter and chert quarry located along a ridge in the southern portion of the project area (Figure 10). Measuring 765 x 435 m, the site was delineated by 55 positive and numerous negative shovel tests, as well as an inspection of the ground surface. Artifacts were continually scattered along the road/survey boundary which forms the northeastern portion of the site, indicating that the site continues on the ridge top to the northeast beyond the survey area. Chert outcrops along the ridge sideslope, and the lithic artifacts from the site reflect quarrying activity. An abundant amount of lithic material was collected from the surface and from shovel tests at the site. This includes 23 cores, 170 pieces of debitage, and 50 stone tools. Noteworthy among the tools are several unifacial and bifacial flake tools, a PPK fragment, a formal endscraper, and a large bifacial chopping/cutting tool recovered in association from the road surface in the northern portion of the site. All of patinated chert, these tools may represent an Early Archaic lithic assemblage. Two Late Archaic PPKs were recovered from the site, including an Abbey and a Bascom. In addition, a sand tempered unidentified eroded (and possibly decorated) sherd and a sand/grit tempered complicated stamped sherd were recovered. The complicated stamped sherd exhibits fine rectilinear stamping, suggestive of the Napier type, but the lack of associated identifiable sherds prevents a definitive cultural affiliation. Most of the site is in relatively poor condition, as evidenced by plowzone cultural deposits usually no deeper than 20 centimeters below surface (cmbs). However, the shovel test containing the complicated stamped sherd revealed sub-plowzone deposits up to 50 cmbs.

**9BY51** is a large prehistoric site located on a terrace above the vast swamp of South Shellstone Creek and the Ocmulgee River (Figure 11). Situated mostly within a mature pine plantation (Figure 12), the site measures 550 x 500 m, and was delineated by surface inspection and 76 positive and numerous negative shovel tests. In addition, two 1 x 2 m test units were placed in the northern portion of the site. This site yielded the highest number and widest variety of artifacts from any site identified in the project area. Components identified at 9BY51 include Early Archaic, Late Archaic, Early Woodland, Middle Woodland, Late Woodland and Middle Mississippian. Diagnostic ceramic types recovered from the site include Satilla, Stallings Island Plain and Punctated, Deptford Check Stamped and Simple Stamped, Swift Creek Complicated Stamped, Weeden Island Plain, Vining Simple Stamped, Savannah Bur-

nished, Etowah Complicated Stamped, and possibly Napier Complicated Stamped. Diagnostic lithics include a Savannah River PPK, a small triangular PPK, a Kirk Stemmed PPK, and a Putnam PPK.

The survey investigation revealed that the site was intensively occupied, particularly during the Late Archaic through the Middle Mississippian periods. One of the most intriguing features of the site is a heavily-disturbed area at the northern edge of the site on the north side of the road (Figures 13 and 14). Situated at the very edge of the terrace, this area has apparently been excavated with heavy machinery, probably a backhoe. The area is characterized by large piles of soil surrounding a depressed area. The configuration of these piles and the depression strongly suggest that a backhoe was used for excavation, with the soil being deposited in piles, ringing the area excavated. It is unlikely that this area was simply a borrow pit, for the soil is still present. On the north side of the large spoil piles are numerous smaller spoil piles which appear to be hand-excavated looting pits. The vegetation growing within this area and aerial photographs (Figure 15) indicate that this activity took place in the early 1960s.

A midden containing materials dating from the Late Archaic through the Middle Mississippian periods was identified within Test Unit 1, which was placed approximately 50 m southeast of the possible mound (Figure 16). Based on the artifact data, it appears that the Middle and Late Woodland occupations are primarily responsible for the midden formation. Artifacts were recovered to a depth of 140 cmbs in Test Unit 1. A small amount of daub from the upper levels of Test Unit 1 indicates that a structure or structures were present at the site at one time. Additionally, a fair amount of shell from the midden reveals that shellfishing was a component of the subsistence strategy.

The second test unit, Test Unit 2, was placed within the disturbed/possible mound area (Figure 17). This unit revealed that this location had been excavated and allowed to naturally refill, but no positive evidence of a mound was found in the unit. Conversely, the soil profile of a shovel test in the disturbed area may evidence mound fill, although it could simply represent historically-disturbed and mixed sediments. The unit was terminated after the completion of Level 7, which exposed a non-anthropogenic sterile stratum saturated with standing water. It appears that this disturbed/possible mound area had been excavated and left open, and was subsequently filled with colluvium which washed in naturally. Likewise, the comparatively few artifacts within the unit are not *in situ*, but were washed in with the colluvium. Artifacts were recovered

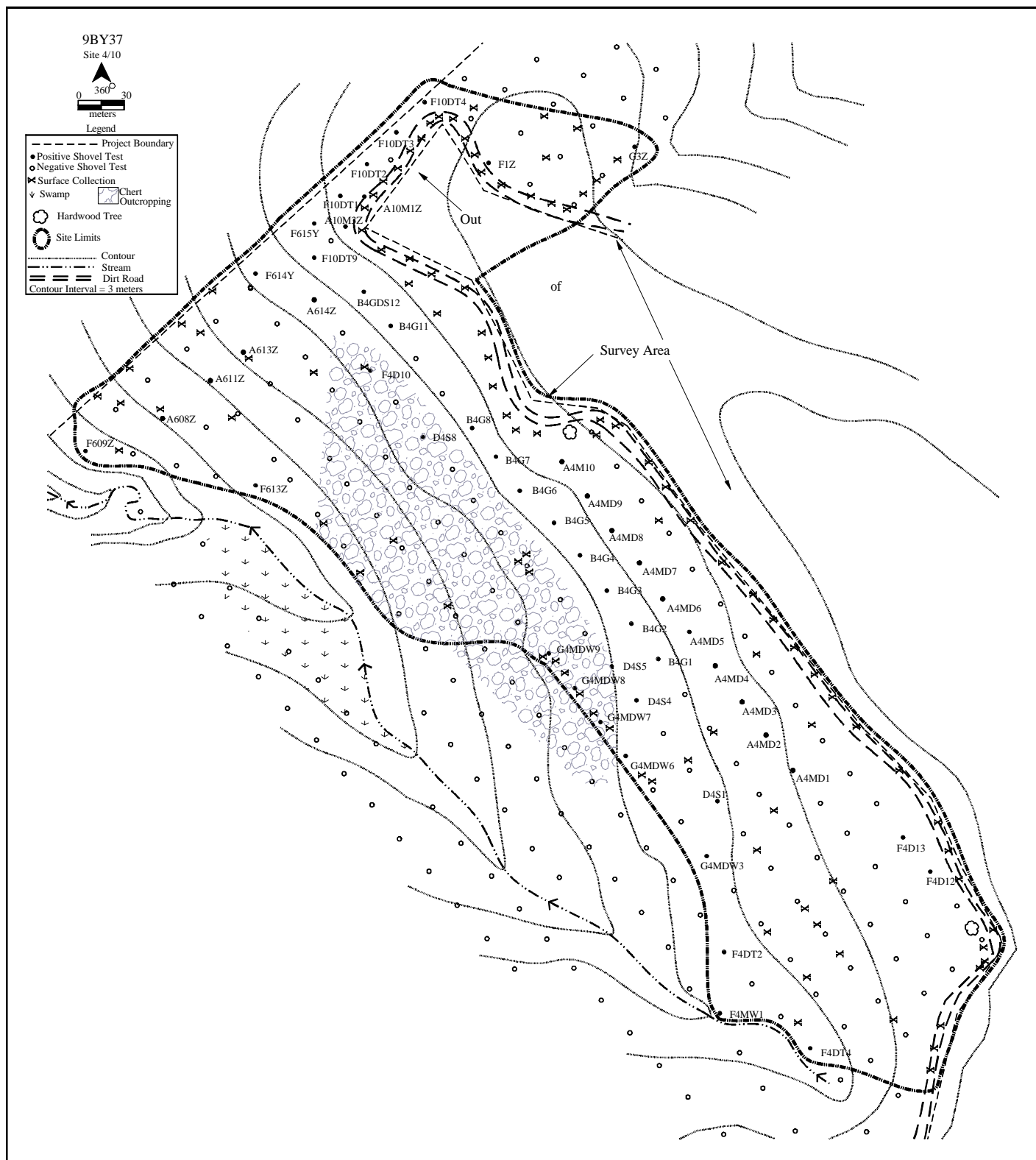


Figure 10. Sketch Map of 9BY37.

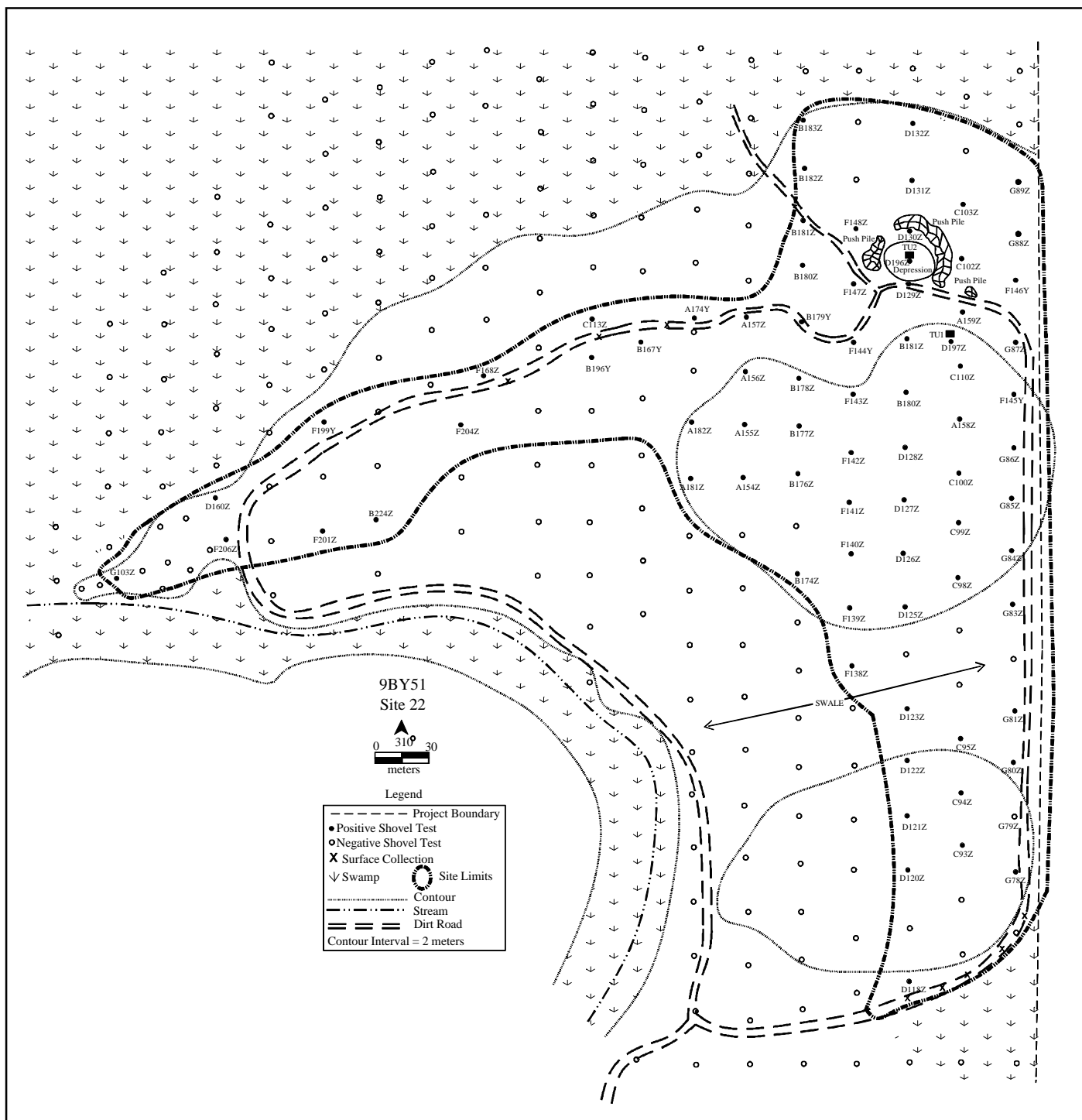


Figure 11. Sketch Map of 9BY51.





*Figure 12. Southern View of 9BY51.*

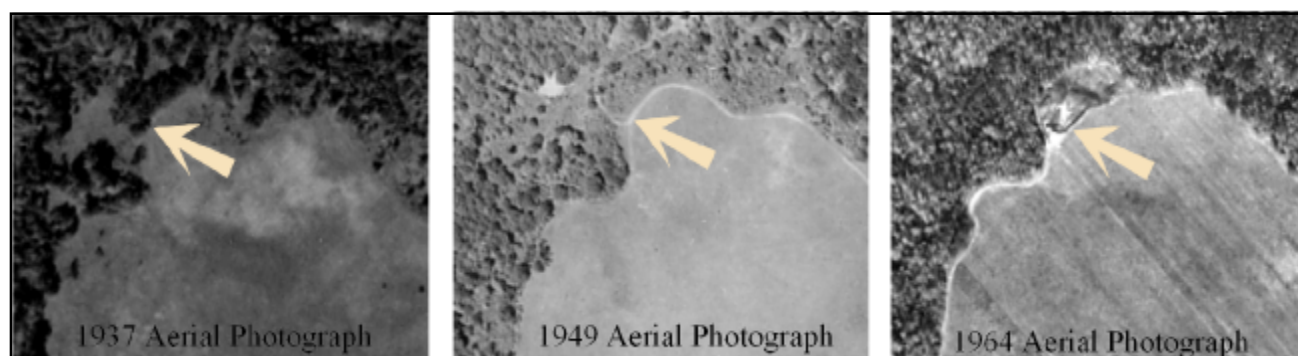


*Figure 13. Southwestern View of Disturbed/Possible Mound Area at 9BY51.*





*Figure 14. Western View of Disturbed/Possible Mound Area at 9BY51.*



*Figure 15. Aerial Photographs of Disturbed/Possible Mound Area at 9BY51.*



*Figure 16. South Wall Profile of Test Unit 1, 9BY51.*



*Figure 17. West Wall Profile of Test Unit 2, 9BY51.*

from Levels 1, 2, 3, and 5. A piece of clear bottle glass, which does not appear to be very old, and a sand-tempered eroded unidentified sherd were found in Level 3, illustrating the jumbled and mixed soil stratigraphy of the unit. No other diagnostic artifacts were recovered from the unit.

Six radiocarbon dates were returned from three shell and three charcoal samples collected from Test Unit 1 (Table 2). These dates do not fall nicely into place, with a positive correlation between sample age and sample depth. Rather, the shell dates show an inverse relationship between age and depth, with the oldest age returned from the most shallow sample. Shell as radiocarbon dating media require a different correction than terrestrial-based samples (e.g., charcoal), since the water-based environment in which shell develops represents a different radiocarbon reservoir than the terrestrial atmospheric setting in which wood grows. Thus, a radiocarbon correction for a given sample must take into account the reservoir from which that sample is derived. Generally, shell is considered a more unreliable dating media than charcoal due to this reservoir effect; this is reflected in the present samples by the larger sigma spreads in comparison to the charcoal samples. However, the three shell dates, taken from the general area of the midden, fall within the Middle Woodland Swift Creek period, and cultural remains from this period are found at the depths of the shell samples.

Thus, the radiocarbon dates and the artifact chronostratigraphy indicate that a fair amount of sediment compaction and artifact movement has occurred within the area of Test Unit 1. However, the artifact data indicate that this spot is roughly chronologically stratified, with the late prehistoric materials in the upper levels, Late Archaic generally in the middle, and Early Archaic remains at the bottom of the sequence (Table 3).

It is obvious from the artifact density and the midden that the site was quite intensively occupied at least during the Late Archaic, Early Woodland, Middle Woodland, Late Woodland, and Middle Mississippian periods, and possibly during the Early Archaic period. Such intensive occupations could have resulted in a fair amount of artifact and ecofact movement and mixing, resulting in the seemingly muddled series of radiocarbon dates.

Although the site has been impacted by silviculture and agriculture, as well as possible artifact-hunting activities, it contains a relatively high degree of integrity. With the exception of the disturbed area, the remains located below the plowzone appear to only have been impacted by natural processes. If the disturbed area does indeed represent the remains of an

earthen mound, it is quite likely it was constructed during the Swift Creek occupation, for there are Swift Creek mounds in the project vicinity. (The Shelley Mound, which may actually be a Weeden Island mound, and the Hartford Mound, are both located south of the Stuckey Tract in Pulaski County). On the other hand, it is possible that it dates to the Middle Mississippian period. Regardless, the site, or at least the northern portion near the terrace edge, was used as a residential village area during the Woodland and Mississippian periods, and possibly during all of the components identified.

**9BY52** is a 140 x 70 m prehistoric artifact scatter located on the first terrace above the Ocmulgee River and a tributary (Figure 18). The site is situated on a point of land which is just slightly elevated above the more swampy area immediately to the northeast (Figure 19). At the time of the survey, the water level of the river and the tributary were very high, lapping a couple of feet below the flat terrace and the southern edge of the site (Figure 20). Seven positive and 15 negative shovel tests were excavated to delineate the site. In the positive tests, the artifacts occurred within the upper stratum of strong brown or brown clay, which occurred no deeper than 30 cmbs. Artifact density was relatively high, particularly in shovel tests D136Z and D137Z, which yielded 38 and 26 artifacts respectively. Artifacts from the site include 62 chert and quartzite debitage, three chert expedient tools, and five sand/grit tempered ceramics. Of the five sand/grit tempered sherds, all but one are unidentifiable due to weathering or small size; the exception is plain. Three of the unidentified decorated sherds were found together in shovel test C114Z and appear to be from the same vessel, although they do not mend. The precise cultural affiliation of the sherds is not determinable. In addition, two small chunks of quartzite were recovered, possibly representing debitage or FCR. The only impacts to this site may have been natural, not cultural, for the site is relatively inaccessible in terms of agriculture or other extensive soil-disturbing activities. The high artifact density of two of the shovel tests and the presence of ceramics suggests that subsurface features may be present.

**9BY56** is a prehistoric artifact scatter located on a narrow ridge spur which juts into the swampy bottomland of South Shellstone Creek (Figure 21). The site, measuring 215 x 65 m, was delineated by six positive and 15 negative shovel tests and a surface collection. The site has been impacted by logging, with the vegetation reflecting clearcutting approximately five years ago. Shovel testing revealed that cultural materials are buried up to 50 cmbs. Artifacts recovered from the site include 33 chert debitage, four cores, seven chipped stone tools, a hammerstone, and four sherds. All but one of the



Table 2. Radiocarbon Dates from Test Unit 1.

UGA #	Provenience	Sample Type	Radiocarbon Age (YBP±1)	Radiocarbon <sup>13</sup> C Corrected Age (YBP±1)	<sup>13</sup> C (Years corrected)
12439	20-30 cmbs	Shell	1,600 ± 330	1,830 ± 330	-11.06 (+227)
12440	30-40 cmbs	Shell	1,380 ± 280	1,620 ± 280	-10.33 (+239)
12160	50 cmbs	Shell	1,360 ± 40	1,600 ± 40	-10.16 (+242)
12157	50 cmbs	Charcoal	2,620 ± 80	2,590 ± 80	-27.02 (-32)
12158	68 cmbs	Charcoal	1,350 ± 40	1,320 ± 40	-26.69 (-27)
12159	107 cmbs	Charcoal	1,230 ± 40	1,210 ± 40	-26.23 (-20)

Table 3. Artifact Chronostratigraphy of Test Unit 1.

Level	Identified Components	Identified Diagnostics
1	LW	Vining ss
2	Uid Woodland/ Miss.	sand/grit tempered plain and unidentified pottery
3	LA; MW; LW; MM	Satilla residual; Swift Ck. cs; Vining ss; Etowah cs
4	LA; EW-MW; LW; MM	Stallings Is., Deptford ck.st. & ss; Weeden Is. pl., Vining ss; Savannah burn.
5	LA; EW-MW	Stallings Is.; Deptford ck.st., Swift Ck. cs
6	LA; EW-MW	Stallings Is.; Deptford ck.st.
7	LA; ?MW?	Stallings Is., Satilla; sand tempered uid cs - ?Swift Creek?
8	LA	Stallings Is., Putnam PPK
9	?LA?	worked/smoothed soapstone
10	EA	Kirk Stemmed PPK
11	LA	single Stallings Is. residual
12	-	none
13	-	none
14	-	none
15	-	sterile level
16	-	sterile level
17	-	sterile level

EA=Early Archaic; LA=Late Archaic; EW=Early Woodland; MW=Middle Woodland; LW=Late Woodland; MM=Middle Mississippian; ss=simple stamped; cs=complicated stamped; ck.st.=check stamped; burn.=burnished; uid=unidentifiable.

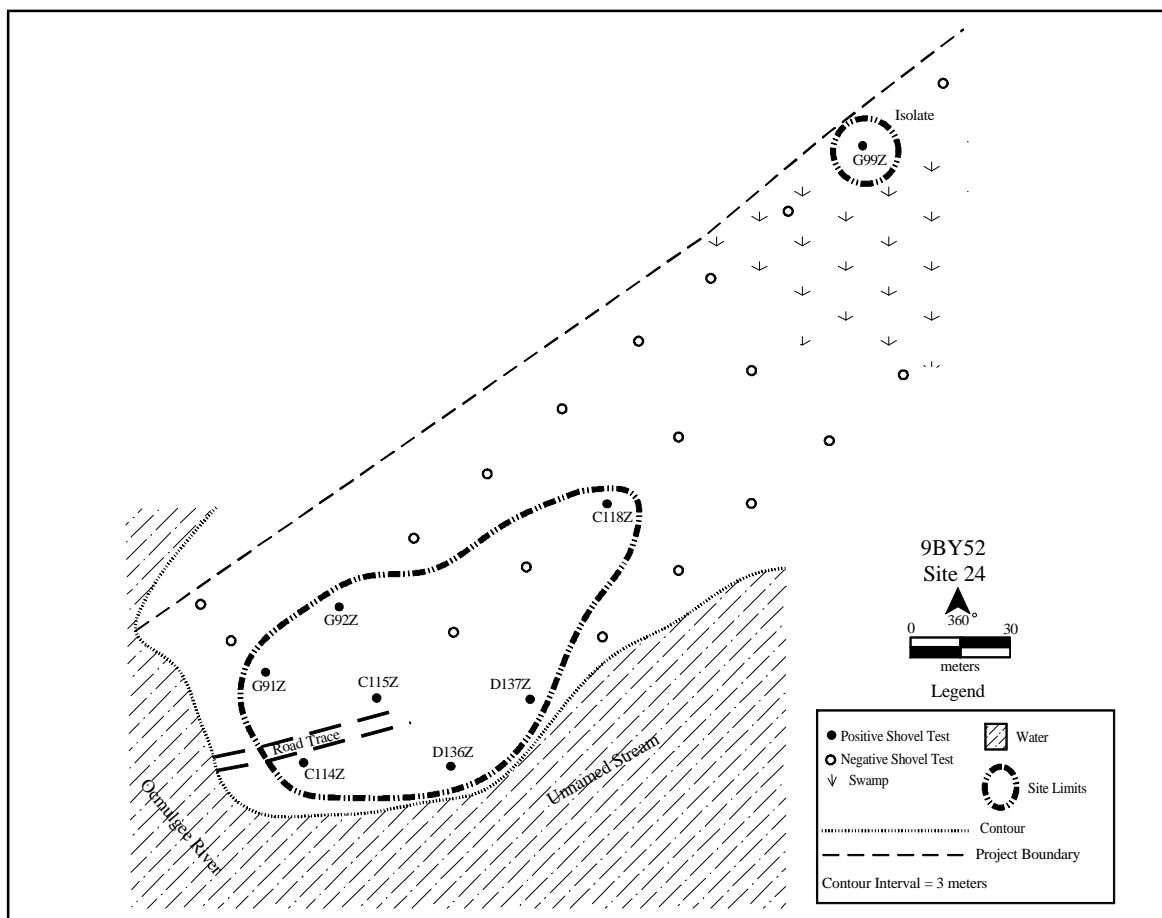


Figure 18. Sketch Map of 9BY52.



*Figure 19. Southwestern View of 9BY52.*



*Figure 20. View West of Ocmulgee River from 9BY52.*

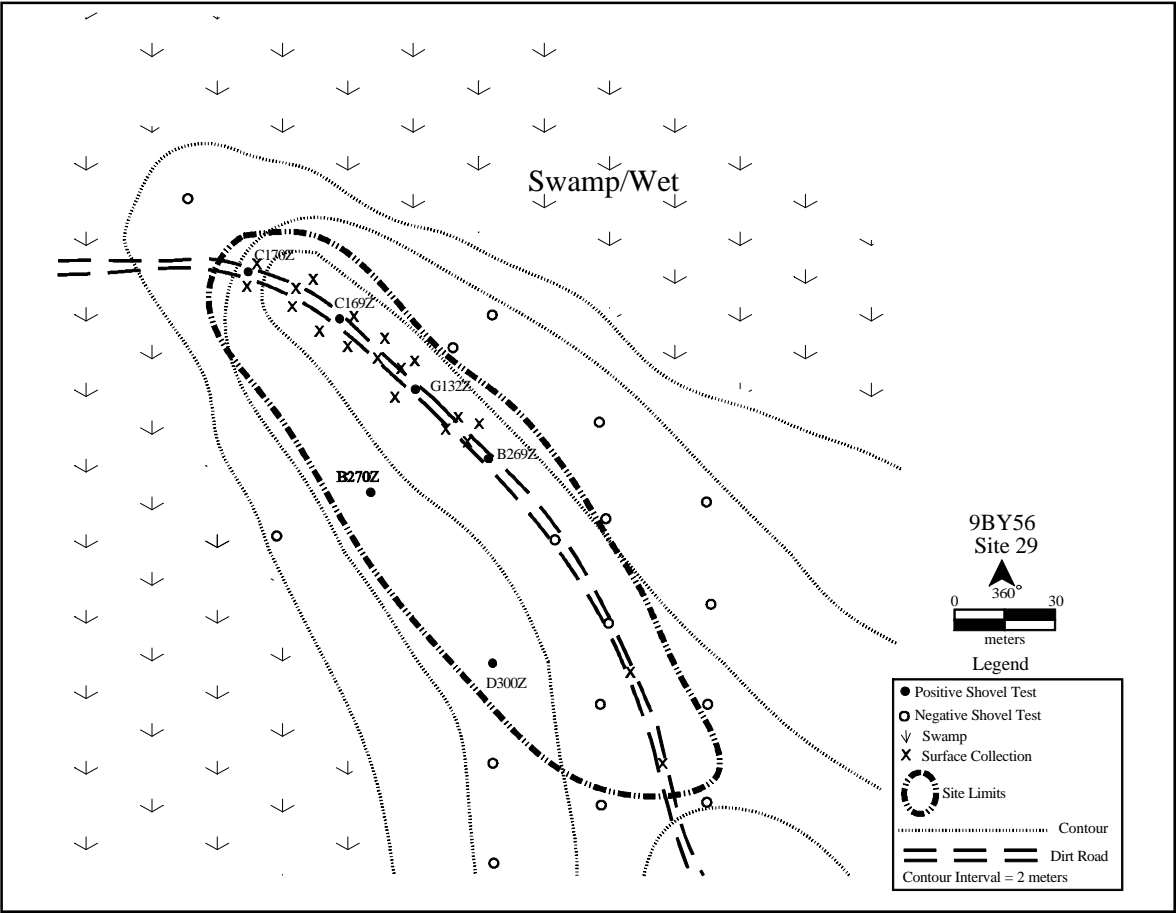


Figure 21. Sketch Map of 9BY56.

ceramics are mixed fiber and sand/grit tempered plain; the exception is a sand/grit tempered unidentified stamped sherd. What is most remarkable about this site is the abundance and sheer size of white chert cores that litter the ground surface, of which only a small sample was collected. Three of the collected cores are very large, each averaging over half a kilogram in weight, yet several cores were not collected which are at least twice the size of those collected. These cores have very large and often broad flake scars. In addition to these large cores, a small one, near the point of exhaustion, was recovered. As no chert outcrop was identified at the site, it appears that chert was quarried at a source a few hundred meters upslope and brought to this location for further reduction. Furthermore, the large size of many of the cores suggests that they were brought here for multiple and long-term use, and cached when the site was abandoned. While it cannot be definitively determined at this stage, it is our opinion that much of the lithic assemblage remains from the terminal Late Archaic component. Sub-plowzone cultural materials were identified during shovel testing, and it is likely that intact features and other deposits are present.

**9BY57** is located on a ridge end above the river (Figures 22 & 23). The site was logged approximately five years ago. Measuring 270 x 145 m, the site was delineated by 22 positive and 29 negative shovel tests and a surface inspection. Maximum artifact depth was 110 cmbs, as recorded in two shovel tests. Artifacts recovered from the shovel tests include 430 chert and quartz debitage, 24 chert tools, a single chert core tool, quartzite/sandstone chunks, and 63 sherds. The debitage distribution indicates that intensive late stage reduction and tool maintenance were the primary knapping activities: approximately 80% of the debitage falls within the 0.25" and <0.25" size categories, and over 75% of the chert debitage has been heat-treated. Most of the tools are utilized flakes, while several informal bifacial and unifacial flake tools are also present. A small triangular PPK was recovered from a shovel test in association with simple stamped and plain sherds. Also recovered were several chunks of quartzite/sandstone, which may represent FCR. All but one of the sherds are of sand/grit or sand temper, the exception consisting of a single fiber and sand/grit residual sherd. Of the identified sherds, most are plain and several are Vining Simple Stamped. A couple of complicated stamped sand tempered sherds were also recovered; one of these exhibits curvilinear stamping, while the other exhibits zoned stamping. While their diminutive size prevents a definitive cultural affiliation, the designs on these sherds are suggestive of Swift Creek decorations. Artifact density in several of the shovel tests was remarkably high, with five of the tests containing at least 40 artifacts each. One shovel test yielded 113 artifacts, all of

which were lithics, while another shovel test is remarkable for yielding 21 sherds. The materials recovered suggest that, at least during the Late Woodland period, the site functioned as a residential location. Discrete activity areas are indicated by the data, including a lithic maintenance location and a cooking/heating/storage area. The archaeological integrity of the site appears to be high, and it is likely that intact features and deposits are present.

**9BY78**, located across the paved road to the north of 9BY57, is situated on the crest and sideslope of a ridge end above the river (Figure 24). The site was clearcut approximately five years ago, while the southwestern corner of the site next to Dykes Road has been impacted by a borrow pit (Figure 25). Vegetation at the site presently consists of pine saplings and briars. Measuring 370 x 260 m, the site was delineated by 20 positive and numerous negative shovel tests and a surface collection. Maximum artifact depth at the site is 110 cmbs, although most of the positive shovel tests yielded artifacts no deeper than 60 cmbs. Artifacts from the site include 99 chert debitage, 15 chert tools, 63 sherds, and an unidentified seed. Similar to 9BY57, most of the debitage is small in size and of heated chert. Ceramics from the site include simple stamped, complicated stamped, and plain wares. The shovel test which evidenced the deepest remains, F511Z, contained one simple stamped rim sherd, one plain sherd, and both of the complicated stamped sherds. The simple stamped sherds fit the Vining type description. One of the complicated stamped sherds exhibits nested diamonds, and is suggestive of Napier or Etowah. The association of the complicated stamped sherds with the Vining Simple Stamped Sherd indicates that they are contemporaneous, and also date to the Late Woodland period. On the relatively narrow ridge top east of the borrow pit area, a single unidentified seed was recovered from a shovel test (G176Z) which also contained 18 sherds and a couple of utilized flakes. One of the sherds is simple stamped, while another is a plain notched rim indicative of Early Swift Creek wares. This shovel test contained remarkably dark and rich organic loamy soil, very suggestive of a midden. The artifacts and the soil suggest that this may be the location of intensive cooking/food preparation activities. The seed may represent subsistence remains from this late prehistoric component, or it may simply be unassociated with the cultural remains; the author feels it is the former. The association of Vining Simple Stamped, Swift Creek Complicated Stamped, sherds which appear to represent Napier or Etowah, and possible subsistence remains is intriguing.

**9BY64** is a small prehistoric lithic scatter located on a ridge nose above a small stream in the northern portion of the project area, and is shaded by mixed mature hardwoods and

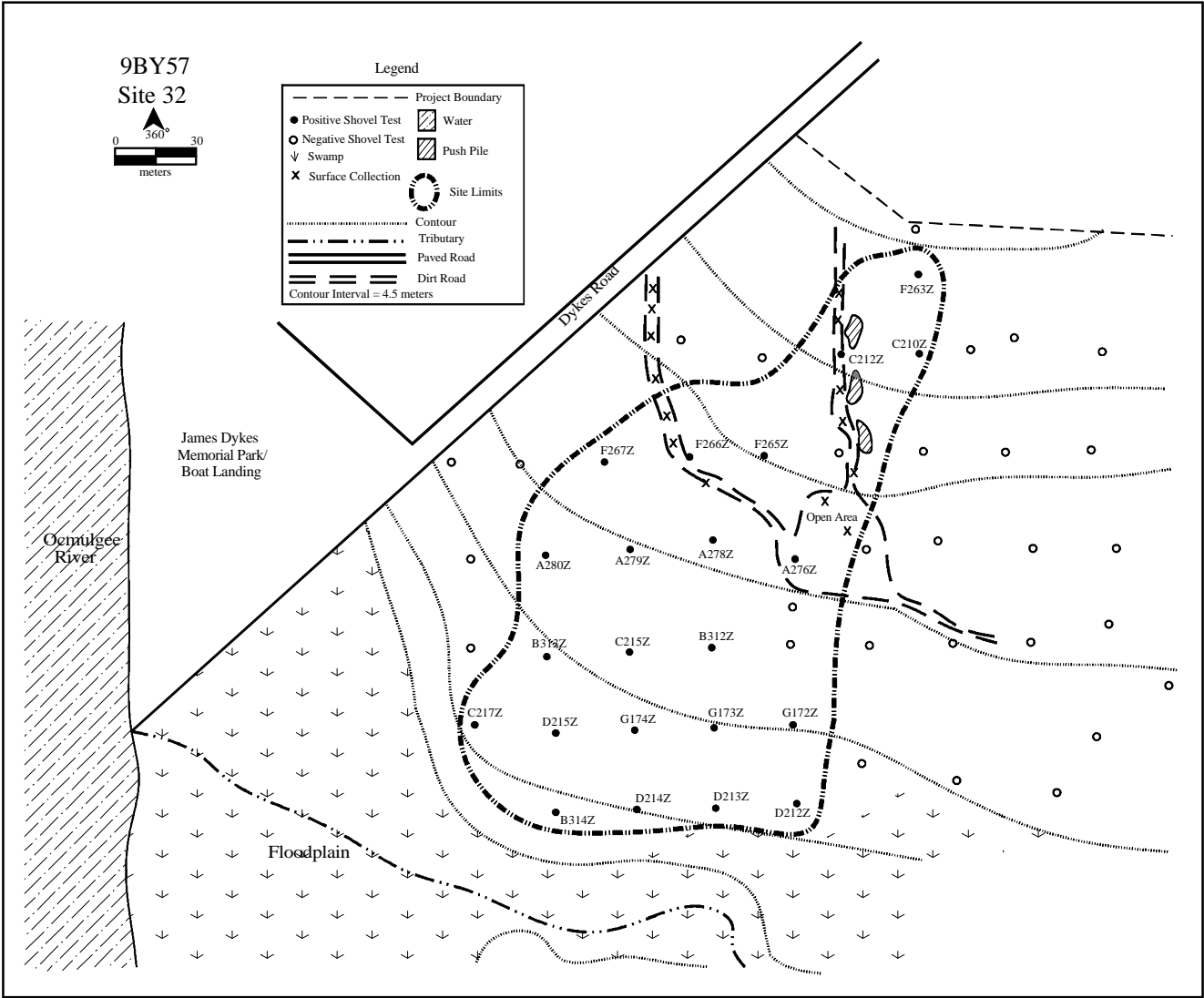


Figure 22. Sketch Map of 9BY57.





Figure 23. Southern View of Open Area at 9BY57.

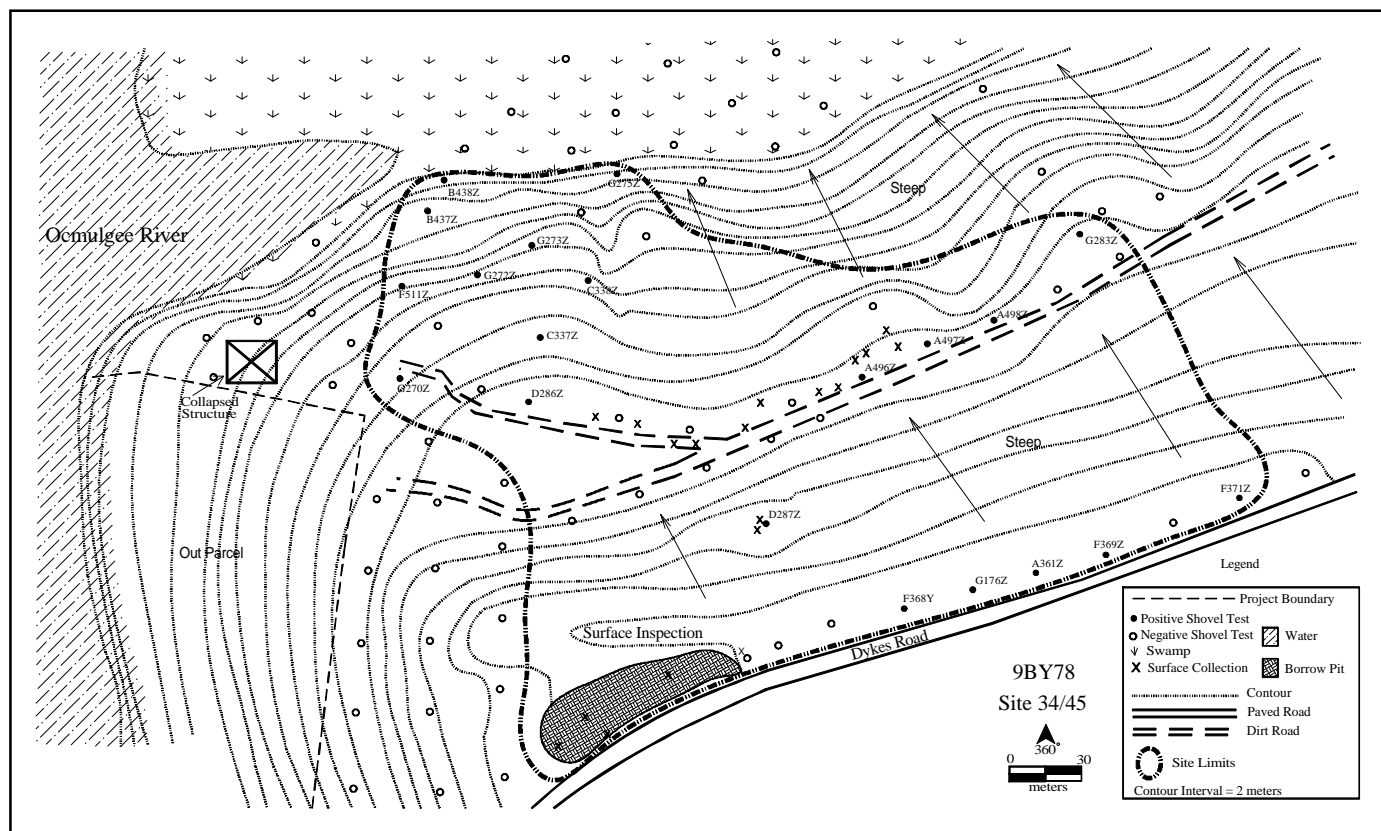


Figure 24. Sketch Map of 9BY78.



Figure 25. Northwestern View of 9BY78 Showing Ridgetop and Borrow Pit Area.

pinus (Figure 26). The site measures 75 x 60 m, and was delineated by three positive and 27 negative shovel tests. Maximum artifact depth was 100 cmbs, as recorded in one shovel test. The two other shovel tests contained materials no deeper than 40 cmbs. Artifacts recovered from the site consist of 20 chert debitage, distributed within 0.5", 0.25", and <0.25" size grade categories; over 50% falls within the 0.25" size class. Seventy percent of the artifacts were recovered from the deep shovel test, F396Z. The distribution and make-up of the debitage suggests that later stage reduction and tool maintenance activities account for the remains. Since none of the artifacts are diagnostic, the age of the site is unknown. The deeply-buried sub-plowzone deposits at this site indicate that intact cultural remains such as features may be present.

**9BY65** is a 300 x 245 m prehistoric chert quarry and artifact scatter situated on a ridge top (Figure 27). Based on the distribution and erosion of artifacts on both sides of the ridge, the southern boundary of the site is conjectured as running out of the survey area across the ridge top; however, the area beyond the survey boundary was not examined. The site was delineated by an intensive surface collection and 15 positive and numerous negative shovel tests.

Shovel testing at the site revealed generally thin topsoil, with maximum artifact depth at 20 cmbs. Much more fruitful than shovel testing, an intensive surface collection along the dirt road and the eroded ridge sides was conducted, with numerous artifacts recovered. (Incidentally, a pile of ceramics was found on a chert boulder, indicating unauthorized collecting activities). Vegetation at the site consists of young pines and briars, while both sides of the relatively narrow ridge have been heavily eroded, exposing outcroppings of chert (Figure 28). The chert is primarily yellow/white in color, although bluish mottling was observed on a few specimens. It occurs as nodules and boulders of all sizes, with fossiliferous and occasionally chalky cortex. In terms of knappability, much of the chert observed was of moderate to high quality. The chert source was clearly exploited by prehistoric populations, yet the exact manner of material procurement is unknown. The chert has been exposed by severe erosion of the ridge sides, and it is likely that this severe erosion has occurred within the last 150 to 200 years due to historic and modern activities (e.g., agriculture, silviculture). Prior to the erosion, the chert may have been buried. If such was the case, then it may be that prehistoric quarrying activities are partly responsible for the erosion. Regardless, a great deal of quarrying and early stage reduction debris is present at the site, most of which was not collected.



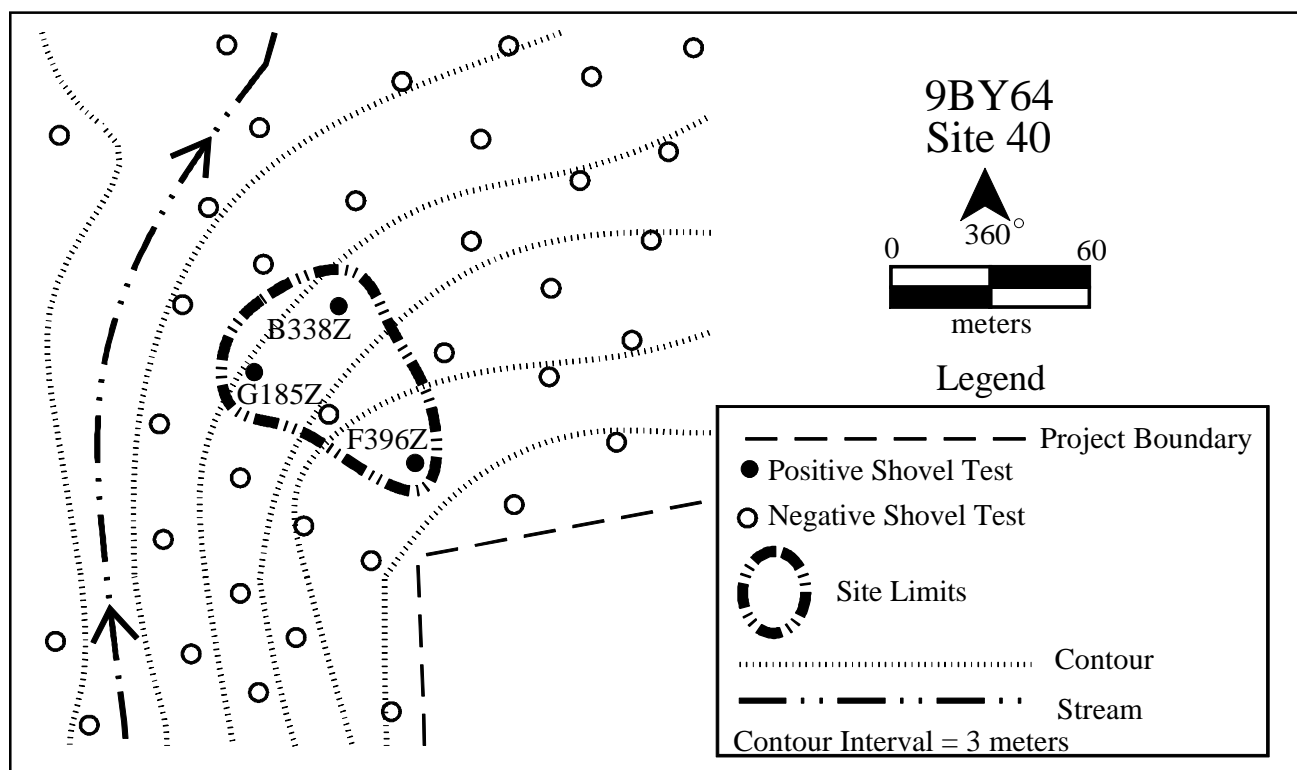


Figure 26. Sketch Map of 9BY64.

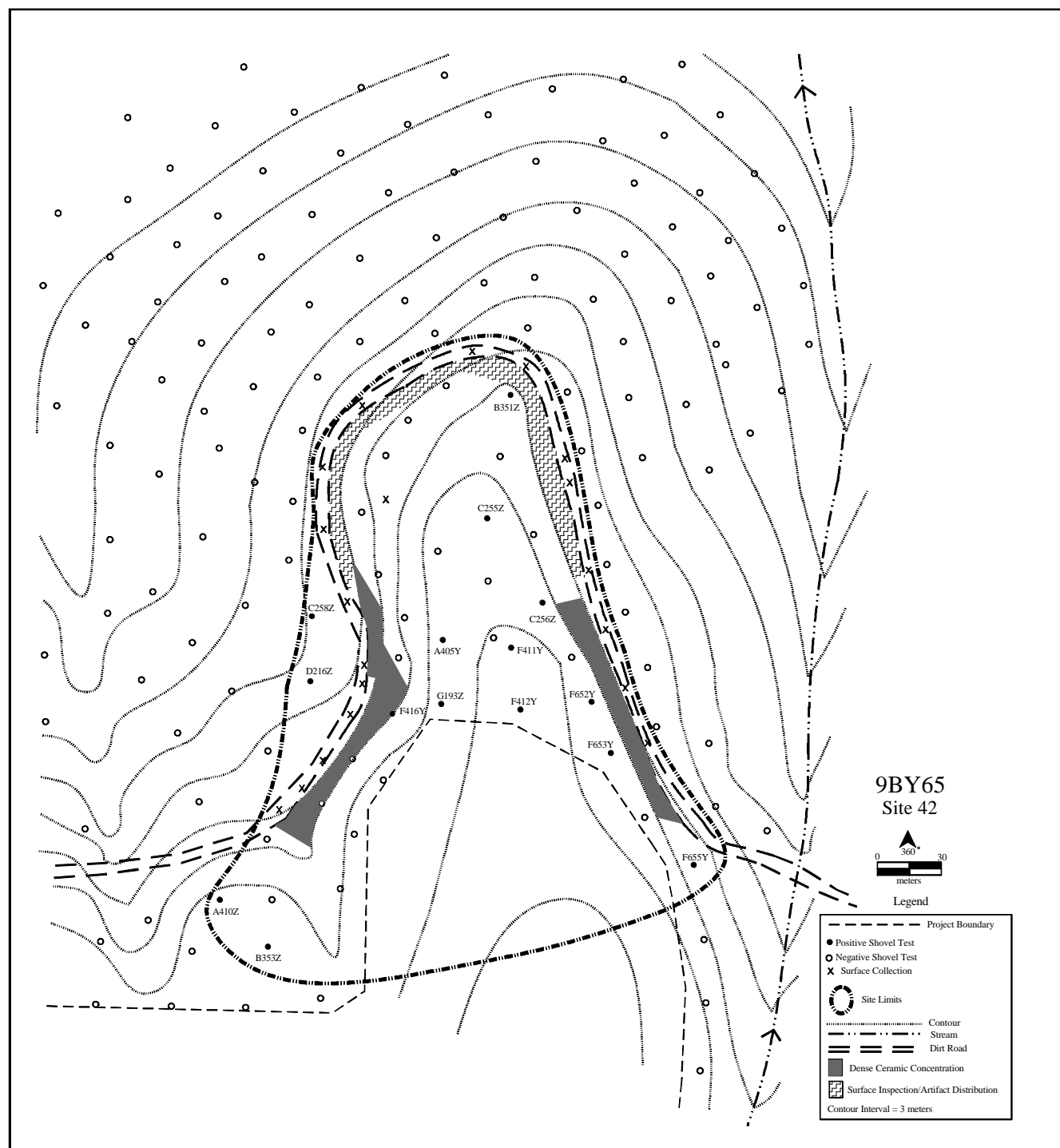


Figure 27. Sketch Map of 9BY65.



Figure 28. Northeastern View of Chert Outcrop at 9BY65.

Artifacts from the site consist of 62 chert debitage, eight cores, eight chipped stone tools, two hammerstones, and 412 sherds. Most of the debitage is large, and much of it exhibits high amounts of cortex. A small triangular PPK was found on the surface of the east side of the ridge, in association with the ceramics. An Early Archaic Kirk Stemmed/Serrated PPK was recovered away from the ceramic concentration. The most remarkable aspect of the site was the sheer number of ceramics present on the surface along both sides of the ridge, directly in association with the chert outcrops. The ceramics were concentrated in the southern portion of the site, on both sides of the ridge, and it was hard to observe the ground surface without seeing a sherd. It is unknown if the sherds are eroding from the ridge sides or the ridge crest, although with the amount of erosion, the latter seems the more plausible explanation. Immediately apparent in the field and from the analysis was the dominance of simple stamped wares: of the identified ceramics, which include plain, simple stamped, and incised, simple stamped wares account for over 97% of the sample. While the cultural remains identified at the site occurred on the surface and in the shallow plowzone, the density of artifacts, particularly ceramics, indicate that features are likely present at the site, probably within the sub-soil matrix of the less-eroded ridge top. Indeed, it is likely that the site represents a Vining village.

**9BY66** is a prehistoric artifact scatter located on a ridge end/terrace just above the vast swamp of the river and Shellstone Creek (Figure 29). As the spot was spared by the clearcutting activities approximately five years ago, the site is shaded by mature hardwoods and sparse shortleaf pines (Figure 30). A spring/seep head is located at the base of the ridge just north-east of the site, where it drains into the wetland. Measuring 90 x 60 m, the site was delineated by seven positive and 25 negative shovel tests. Maximum artifact depth at the site was 70 cmbs. Artifacts recovered from the site include 45 chert debitage, nine chert tools, and two sand/grit tempered plain sherds. The sherds cannot be culturally or temporally affiliated any more specifically than the Woodland or the Mississippian period. One of the shovel tests yielded half of the total artifact assemblage and almost half of the debitage. Over 90% of the debitage is heated chert, while over five-sixths of it fall within the 0.25" and <0.25" size grade, most of that within the larger size. Of the tools, all but one are expedient in nature, the exception being a biface fragment. The artifact assemblage, with the high proportion of flake tools and small-sized flakes, and the location of the site at the interface of the swamp and the uplands, suggest that the site served as a temporary hunting camp. The site contains sub-plowzone cultural deposits, and it may be that the site has likely never been plowed due to its geographic location.

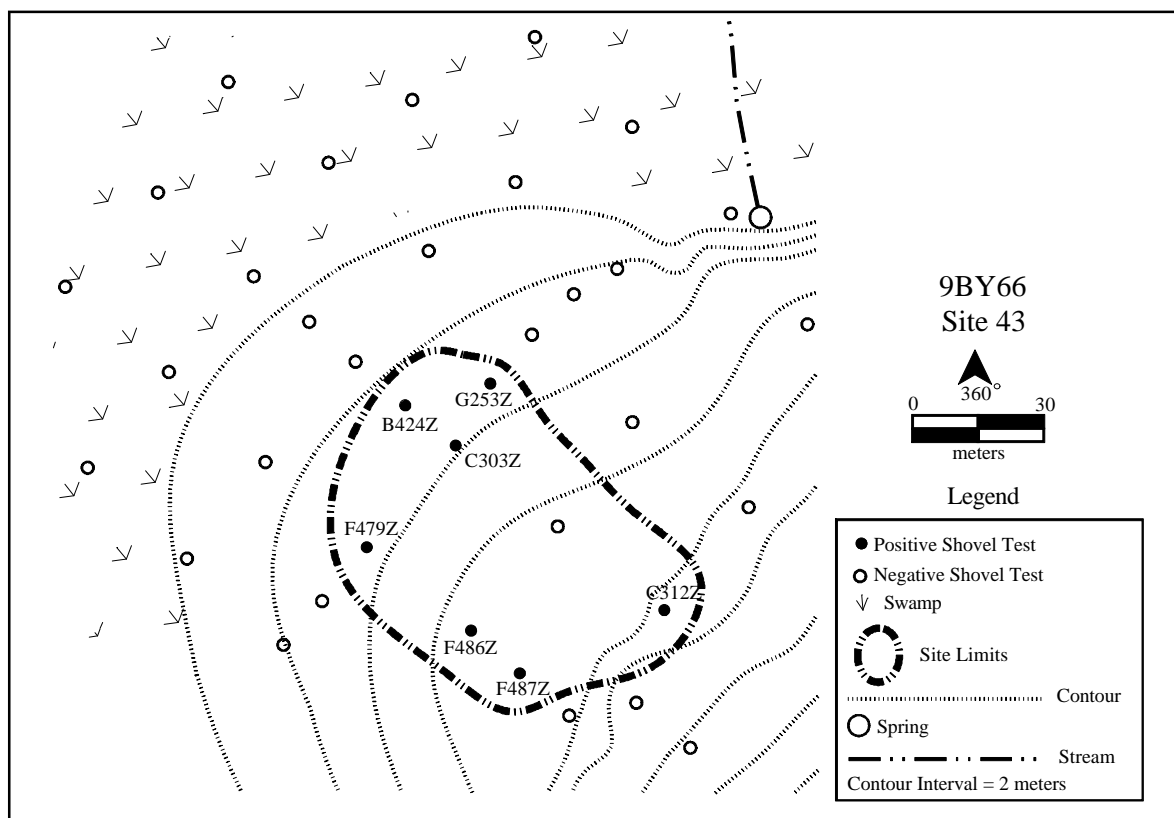


Figure 29. Sketch Map of 9BY66.



Figure 30. Southwestern View of 9BY66.

# Chapter 4. Organization of Lithic Technology

Prehistoric populations located within the Stuckey Tract were not lacking for raw material with which to make stone tools. Chert outcrops are relatively common within the Stuckey Tract, ranging in size from less than 10 meters in diameter to hundreds of meters in length (Figure 31). Outcrops occurred throughout the project area, and were observed on ridge tops, slopes, stream banks, and in stream beds; generally, however, chert is exposed most abundantly and visibly along ridge sideslopes. Chert sources were observed at sites 9BY35, 9BY37, 9BY39, 9BY41, 9BY43, 9BY44, 9BY55, 9BY65, and 9BY67. Of particular note is an extensive outcrop along the ridge and adjacent stream at sites 9BY43 and 9BY44; within this stream bed, relatively high-quality water-worn nodules of primarily brown chert are present (see Figure 5). Another notable source is the yellow and white chert outcropping at site 9BY65 (see Figure 28). The chert is quite variable in terms of color, texture, and knappability quality. Colors include white, brown, brownish yellow, tan, and grayish blue, while knappability quality ranges from poor to excellent. The cortex of the chert varied in hardness, with some specimens exhibiting a brittle exterior and others having a chalky rind. Much of the chert observed is fossiliferous, while several specimens were lustrous and similar to chalcedony. Numerous chert samples were collected from the project area, from both upland and stream bottom settings (Figure 32). Gresham (1999) notes several chert outcrops within the proposed fishing lake less than half a mile south of the Stuckey Tract, although none appear to have been utilized by prehistoric peoples, perhaps due to the mediocre quality of the material.

The presence of the chert sources within the Stuckey Tract offers an excellent opportunity for a detailed examination of the technological organization of the various groups which once occupied the area. Kelly (1988:717) defined technological organization as:

the spatial and temporal juxtaposition of the manufacture of different tools within a cultural system, their use, reuse and discard, and their relation not only to tool function and raw material type, but also to behavioral variables which mediate the spatial and temporal relations among activity, manufacturing, and raw material loci.

In line with the study of technological organization, a relatively recent and promising approach to stone tool technology is known as *chaîne opératoire*, meaning operational sequence (Grace 1996). This approach involves the study of the life history of the lithic material, encompassing data on raw material procurement, primary reduction of nodules to cores, core and biface reduction, and the use and discard of the artifacts. Because the source of material used for stone tool production is known, the entire continuum of the chipped stone tool system – from procurement to discard, from core reduction to biface reduction and maintenance – is mappable. The lithic analysis of the assemblage from the Stuckey Tract was designed to illuminate the technological organization of the various chronological and cultural components identified during the survey, which in turn would provide information on behavioral patterns such as settlement, mobility, and subsistence strategies.

The following categories were employed for the lithic artifacts during the analysis:

*Projectile Point/Knife (PPK)*: Also referred to as a “point”, this is a formal bifacially-flaked projectile point and/or knife, typically made in a style which is temporally or culturally diagnostic. The different PPK types employed during the analysis include small triangular, large triangular, lanceolate, contracting stemmed, side-notched, and straight stemmed. When possible, a PPK is placed into a categorical type (e.g., Kirk Stemmed, Abbey) which indicates its age, morphology, and occasionally its function.

*PPK fragment*: A fragment of a PPK which does not allow typological classification. Due to its fragmentary condition, the artifact is not temporally or culturally diagnostic. If a portion of a PPK is identifiable and diagnostic, it is classified as a PPK rather than a PPK fragment.

*Biface*: A bifacially-flaked artifact which is not temporally diagnostic. May have several different functions, such as tool, preform, or flake blank.



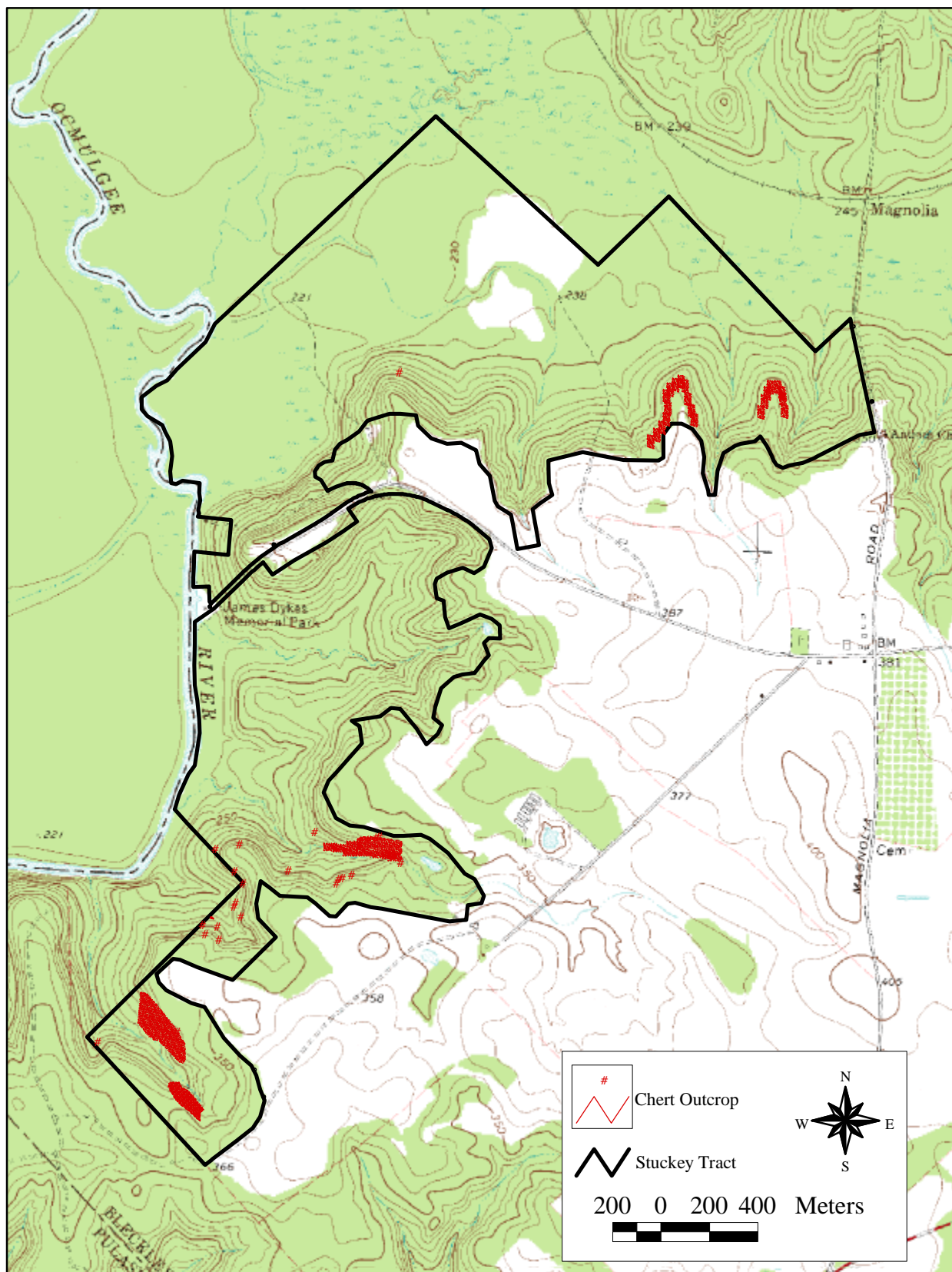
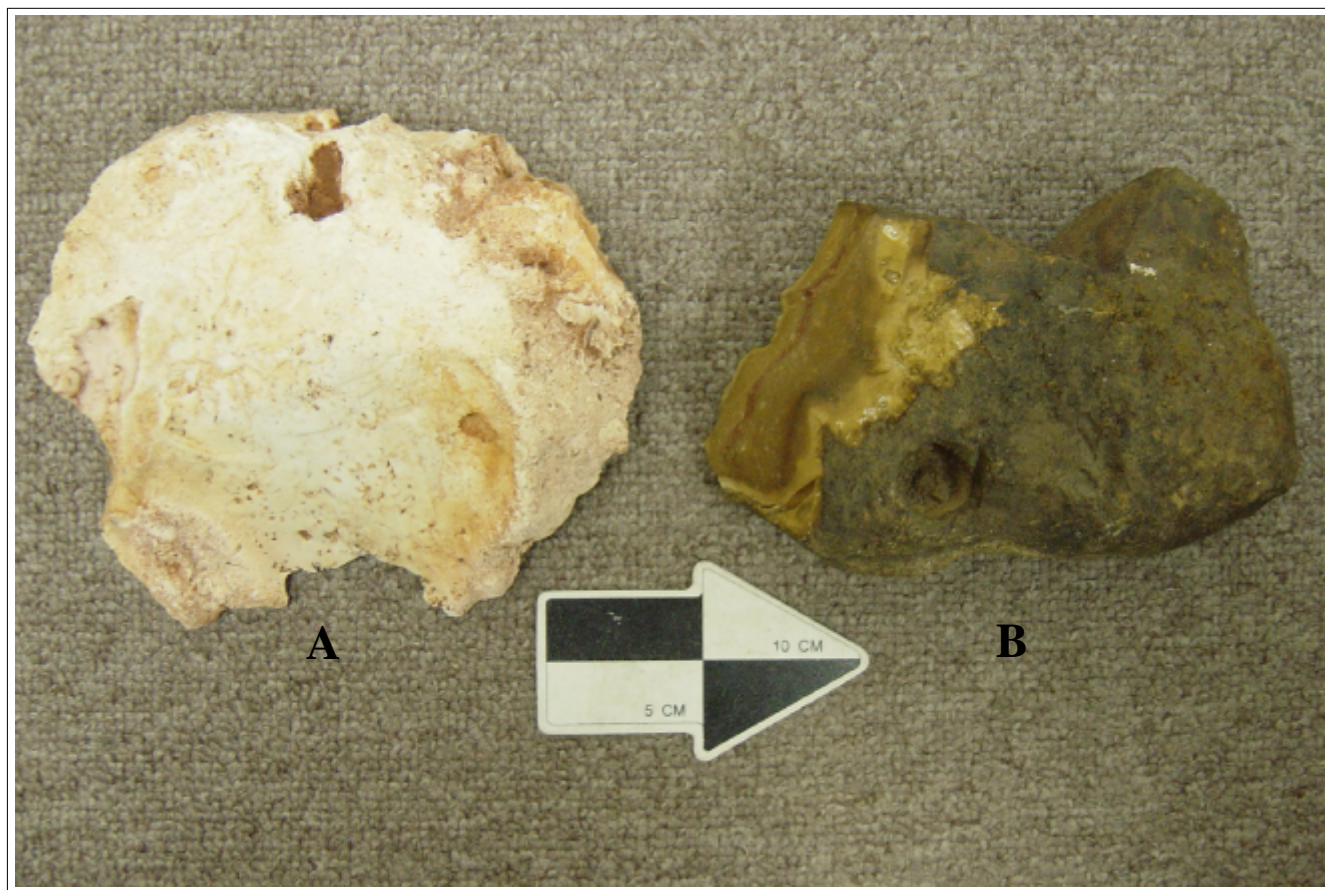


Figure 31. Chert Outcrops Observed During the Survey.

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*Figure 32. Photograph of Chert Samples.  
Sample A recovered from eroded sideslope at 9BY65; Sample B recovered from stream near 9BY44.*

*Biface fragment:* An incomplete or fragmentary portion of a biface.

*Early stage preform:* A bifacially-flaked blank typically ovoid or triangular in shape and lacking a stem configuration; believed to be intended for later modification into a PPK.

*Flake tool:* An intentionally-modified tool made from a flake; often exhibits micro-flaking and/or retouch in order to increase the effectiveness. Several different types of flake tools were identified within the artifact assemblage, including informal and formal unifacial flake tools, as well as informal and formal bifacial flake tools. Generally, flake tools are considered informal unless they have a hafting element or if subtle characteristics indicate they were curated and formal. Early Archaic and Paleoindian flake tools may be identified based on patination and form, but generally flake tools are not diagnostic.

*Perforator:* Typically, a flake tool which has an acute projection which exhibits intentional modification for use and/or unintentional modification from use as a perforating implement.

*Graver:* A flake tool which has a sharp, acute point (though generally not as long as a perforator) which exhibits intentional modification for use and/or unintentional modification from use, typically the latter.

*Utilized flake:* A piece of debitage which exhibits use-wear but has not been intentionally modified. A utilized flake is believed to be expedient in nature, as it can be quickly produced or acquired in response to immediate circumstances.

*Other modified flake:* This category was used for problematic flakes which exhibit intentional or unintentional modification but which defy categorization due to their condition.

*Scraper:* A scraper is a flake tool which exhibits edge modification that produces a uniform and continuous edge. Occurring as side scrapers or endscrapers, or a combination of the two, these typically have relatively steep edge angles for heavy-duty use. Scrapers are generally believed to be formal curated tools.

*Chopping/cutting tool:* May be either bifacial or unifacial; this is a heavy-duty tool with a relatively steep edge angle believed to have been useful for chopping and/or cutting. Some of these exhibit use-wear.

*Core:* A chipped stone item which served as a source of tools, such as flakes and flake blanks; include types such as random/other and bipolar. A 'random core' refers to one which

shows no recognizable pattern of flake removal. An 'other core' refers to one which appears to have been intentionally shaped or flaked in a recognizable pattern, such as bifacially or unifacially. A 'bipolar core' is one which was set upon a hard surface, such as a rock anvil, and struck on one end. The bipolar method is generally believed to have been used with small-sized pieces, for purposes of conservation and because freehand percussion was not possible due to the small size of the piece.

*Core tool:* A core which was also used as a tool, such as a cutting or chopping implement.

*Hammerstone:* All of the hammerstones from the project area are rounded quartzite cobbles which exhibit battered and/or pitted areas from use. These are generally believed to be used for percussion in lithic reduction, although they certainly could have been used for other heavy-duty tasks, such as pounding.

*Hammerstone/groundstone:* Similar to hammerstones, but exhibit use-wear from grinding; in addition to hammering/pounding, these may have been used as abraders for lithic reduction.

*Groundstone:* The single groundstone we recovered from the project area is diabase, a metamorphic rock, and appears to be a fragment of a bannerstone or atlatl weight.

*River cobble:* This category was used for water-rounded quartz/quartzite cobbles which exhibited no apparent modification. Such artifacts may have been used for heating/cooking (i.e., FCR) or for tools such as hammerstones, yet the function could not be determined.

*Fire cracked rock (FCR):* Rock which has been modified from heating, generally believed to have been used for cooking/heating purposes.

*Debitage:* Debris from the manufacture of chipped stone tools.

The lithic debitage analysis was ultimately aimed at determining the lithic organization of the groups responsible for the debitage, and designed to facilitate a diachronic comparison of these strategies. According to Shott (1994), debitage possesses properties which can reveal as much, if not more, information concerning human behavioral patterns than can the actual result of lithic reduction strategies. In the last 25 years, the replicability and reliability of the results obtained using traditional debitage analysis methods have been widely called into question (e.g., Andrefsky 2001; Bradbury and Carr 1995; Burton 1980; Fish 1978; Ingbar et al. 1989; Johnson 2001; Keith 1998; Magne 1985; Odell 1989; Raab et al. 1979;

Shott 1994; Sullivan and Rozen 1985; Wilmsen and Roberts 1978). The traditional lithic analysis framework which forms the basis for many archaeological interpretations is the primary/secondary/tertiary typology, which is based on the amount of cortex covering the dorsal surface of a given piece of debitage. Generally, in this typological framework, flake types (primary, secondary, and tertiary/interior) are often implicitly believed to correlate with distinctive reduction stages (early, middle, and late stages, respectively). However, the underlying assumption that flake types are technologically specific and exclusive to modes of reduction is dubious due to problems of equifinality documented in lithic reduction experiments (cf. Shott 1994). Such studies have shown that different production and reduction modes (e.g., hard hammer percussion, pressure flaking) can result in similar flake types and/or patterns (e.g., platform lipping).

In response to these problems, various alternative lithic analysis methodologies have arisen. One of the most productive, in terms of replicability and inferential potential, is known as mass analysis, first detailed by Ahler (1989). Concerned with distinguishing the reduction modes used to produce an assemblage, mass analysis focuses on size grade, weight, and cortex of groups of flakes, not individual flakes. Although not requisite, this method can be enhanced by comparing the archaeological assemblage to debitage produced through controlled and well-documented knapping experiments. Mass analysis experiments have found that as reduction continues, several general trends obtain: the average weight of flakes decreases; the percentage of flakes retained in the 0.25" size grade increases; and there is a decrease in the percentage of cortical flakes (e.g., Ahler 1989; Ahler and Christensen 1983; Bradbury and Franklin 2000; [http://www.crai-ky.com/research/lithic/mass\\_analysis.html](http://www.crai-ky.com/research/lithic/mass_analysis.html)). Patterson (1990) found that debitage proportions plotted against debitage size generally exhibit a characteristic concave curve for biface reduction, as opposed to irregular patterns for core reduction.

Apart from, or in addition to, mass analysis, some researchers conduct individual flake attribute analysis, recording such attributes as weight, platform type, number of platform scars, number of dorsal scars, and platform angle. In terms of a Cultural Resource Management (CRM) project, however, such intensive analysis can be very time-consuming and costly. For the present study, mass analysis was combined with a limited individual flake analysis. Thus, debitage was characterized by type, material, amount of cortex, and size. These classifications are explained below:

*Type:* Apart from bipolar flake, I did not use common reduction-specific categories, such as bifacial thinning flake or

retouch flake. Rather, I used what I believe to be objective baseline type categories for debitage: unspecified flake, bipolar flake, flake fragment, and shatter. An *unspecified flake* refers to a complete flake, with a distinguishable platform, bulb of force or percussion, dorsal and ventral faces, and intact margins. A *bipolar flake* is one which has been produced through striking (percussion) a core or other lithic item which rests upon an anvil. Such a flake is often thin and exhibits irregular percussion ripples; contrary to popular belief, a bipolar flake typically does not exhibit bulbs of percussion at either end (Crabtree 1982). (Within the project area, only a few bipolar flakes were recovered, all of which are of quartz [see Benson et al. 2001]). A *flake fragment* is just that – a flake in fragmentary condition, such as the distal portion of a flake without the striking platform. *Shatter* is debitage which does not exhibit any discernible attributes which indicate its orientation of removal from the parent material – that is, it lacks a platform and bulb of percussion, and it is usually difficult to distinguish between dorsal or ventral faces. Frequently, shatter is blocky and irregularly shaped.

*Material:* Materials include Coastal Plain chert (CPC), heated Coastal Plain chert (HCPC), quartz, quartzite, metavolcanic, Ridge and Valley chert (RVC), and unidentified chert. Distinguishing HCPC from CPC was often difficult, and not entirely objective. Attributes which indicate that CPC has been heated include a pink, red, dark red, or purple color, crazing and/or potlidding, and/or a high amount of luster or glossiness. The most problematic specimens were of white chert, which does not necessarily change color when heated. Rather, those white chert specimens exhibiting a lustrous waxy sheen were categorized as HCPC. If I could not confidently determine if a piece had been heated, then I placed it in the (default) CPC category. Thus, the ratios of heated to unheated chert should not be considered indubitable, but rather as reflecting my best educated opinion.

*Cortex:* The amount of cortex was coded as 0%, 1-25%, 26-50%, 51-75%, 76-99%, and 100%. As with heat-treatment, determining this for CPC (and HCPC) was occasionally problematic and not entirely objective. Specifically, the cortex – a geologically-weathered exterior rind – often extends to the interior of the piece, which has been exposed through flaking. Thus, the interior (and by definition, non-cortical surface) of a piece may be covered with what appears to be cortex. In such cases, flake scars and ridges were examined to determine if indeed what was exhibited was actual exterior cortex or cortex which extended into the interior of the piece. Once again, I used my best judgment in this matter, but the results should not be considered incontrovertible.

**Size:** Two size measurements were used: size grade and weight. Debitage was sifted through a series of screen sizes, consisting of 1.5", 1.0", 0.5", 0.25"; those pieces which fell through the 0.25" screen were coded as less than 0.25". Each of the size-graded sets were then weighed. It must be remembered that 0.25" screen was used for artifact recovery in the field, and consequently, the proportions of debitage less than 0.25" in size is necessarily under-representative of the true amount. Were it not for the wet conditions which caused sediment build-up on the field screens (and thus an effectively smaller screen size), and the attentiveness of the field surveyors, artifacts less than 0.25" in size would not have been recovered at all.

Each individual piece of debitage was also examined, using a 10x magnification hand lens where necessary, for evidence of use as a tool. Such evidence generally consists of micro-flaking from use or from intentional modification. If a specimen evidenced possible modification or use-wear, then this was recorded in the "Comments" section of the database and the artifact remained classified as debitage. If a specimen evidenced use-wear or modification, then it was pulled from the debitage and classified as the appropriate tool type (e.g., utilized flake, flake tool).

## DEBITAGE

Nearly 5,900 pieces of debitage were recovered from the Stuckey Tract. Table 4 summarizes the debitage by material type, size grade, percentage of cortical pieces within size grade, and average weight per piece within size grade. It is immediately apparent from the table that over 99% of the material is chert; the predominance can almost certainly be attributed to the presence of the chert sources within the project area. Indeed, while it is impossible to specifically source the lithic artifacts (at least at this level of investigation), it is believed that the vast majority of the chert debitage comes from the chert sources within or very near the Stuckey Tract. Several other materials were recovered which account

for less than one percent of the debitage assemblage; these include quartz, quartzite, Ridge & Valley chert, unidentified chert, and metavolcanic.

The two forms of chert – unheated (CPC) and heated (HCPC) – occur in nearly equal proportions, with HCPC slightly outnumbering CPC. As expected within a source area, there is a higher frequency of larger pieces (i.e., 1.5" and 1.0" size class) of unheated chert than heated chert. Additionally, within the largest size class, there is a greater proportion of cortical pieces and a higher average weight (per piece) than found for the HCPC category. This is related to the primary or early stage reduction of chert nodules: newly-acquired nodules exhibit cortex, and generally would not have been subjected to heat-treatment (due to their thickness and moisture content). Debitage from such pieces would have a comparatively high percentage of cortex. Interestingly, in the 1.0" size grade, there is a much larger proportion of heated chert cortical specimens than unheated chert cortical pieces, while the average weight of the pieces are nearly identical. The precise reason for the cortical difference is unknown, but it likely relates to different usage patterns for the two forms of the material. Perhaps heated chert was favored for biface production, and knappers removed cortical pieces early in the reduction process, thereby creating a high number of cortical debitage in this size grade. Conversely, unheated chert was used more for core reduction, and the removal of cortex was not of high priority.

By the time the chert debitage reaches the 0.5" size, the frequencies of unheated and heated chert are virtually identical, as is the average weight per piece for each material type. There is a slightly greater proportion of cortical pieces of unheated when compared to heated chert. The increasing proportion of heated to unheated chert continues into the small size (i.e., 0.25" and <0.25") debitage classes, where there are greater proportions of HCPC than CPC. The proportions of cortical debitage and average weight for CPC and HCPC in these two smallest size classes are practically identical.

Table 4. All Debitage

Size Grade	1.5"			1.0"			0.5"			0.25"			<0.25"			Total		
	ct	%	av.	ct	%	av.	ct	%	av.	ct	%	av.	ct	%	av.	ct	%	av.
Material		cort.	wt.		cort.	wt.		cort.	wt.		cort.	wt.		cort.	wt.		cort.	wt.
CPC	19	84	91.2	75	39	21.4	716	18	3.1	1774	5	0.4	289	1	0.1	2873	9	2.2
HCPC	7	71	68.6	27	59	20.0	711	15	3.2	1894	6	0.4	347	1	0.1	2986	8	1.4
Quartz	0	0	0	0	0	0	0	0	0	8	0	0.4	1	0	0.2	9	0	0.3
Quartzite	0	0	0	0	0	0	8	63	6.5	9	22	0.3	0	0	0	17	41	3.2
RVC	0	0	0	0	0	0	0	0	0	1	0	0.1	0	0	0	1	0	0.1
Metavolcanic	0	0	0	0	0	0	2	0	1.7	0	0	0	0	0	0	2	0	1.7
Ud chert	0	0	0	0	0	0	0	0	0	1	0	0.4	0	0	0	1	0	0.4
Total	26	81	85.1	102	44	21.0	1437	17	3.2	3687	5	0.4	637	1	0.1	5889	9	1.8

Of the minority materials, quartzite is the most common. Quartzite debitage is nearly equally split between the 0.5" and 0.25" size classes. Nearly two-thirds of the 0.5" quartzite specimens exhibit cortex, while this proportion drops to approximately one-fifth for the 0.25" group. For the few pieces of quartz debitage, all but one piece fall within the 0.25" size grade and no pieces contain cortex. The small size and low frequency of quartz indicate that the quartz was obtained from distant sources, rather than from local stream settings. Two pieces of metavolcanic debitage were recovered, both of which fall within the 0.5" size grade. One piece each of Ridge & Valley chert and unidentified chert were recovered, both of which are 0.25" in size and are non-cortical.

Overall, the proportions of cortical debitage within each size grade decrease with the decrease in size, as does the average weight per artifact. Debitage falling within the 0.25" size category accounts for nearly 63% of the entire assemblage, followed by approximately 24% within the 0.5" category, 11% within the <0.25" category, 2% within the 1.0" category, and less than one percent within the 1.5" category. As a whole, the debitage assemblage reveals a significant reliance on local chert to meet the entire range of chipped stone tool needs.

## **HAMMERSTONES**

Nine hammerstones were recovered during the project, including both complete and fragmented specimens (Figure 33). All of these are rounded quartzite cobbles, and the complete specimens range in size from small (32 g) to large (over 450 g). One of these also evidences pitting, possibly from use as an anvil. Not surprisingly, all were found at chert outcrops or sites evidencing intensive lithic reduction activity.

## **CORES**

Numerous cores were recovered during the survey (Figures 34, 35, and 36), the vast majority of which are manufactured from chert. Of the chert cores, 90% are of unheated chert, with the remaining 10% of heated chert. The reason for the overwhelming majority of unheated chert cores in comparison to heated chert examples is believed to stem from the physical properties of this artifact type. When heated, bulky, thick chunks (i.e., cores) often will explode due to internal moisture or may simply show uneven results. In contrast, thin flakes and spalls (i.e., tools) are more likely to remain intact and undergo uniform heat alteration. Thus, cores generally were not heated, while flakes and spalls were.

The most common core type is random/other, which includes bifacial and amorphous forms. Approximately 20% of the

cores from the Stuckey Tract also served as tools (Table 5). The majority of these are bifacial, and served as heavy-duty chopping/cutting tools; one is unifacial. All but one of the core tools is of unheated chert, while the single heated chert example is relatively small, falling within the 0.5" size grade. Very few bipolar cores were recovered, and all were relatively small, as is common for bipolar cores.

The single quartz random/other core may actually represent a bipolar core, but this could not be definitively determined. The two identified quartz bipolar cores (see Figure 34 b and c) are small in size, one falling within the 0.5" size grade and the other within the 0.25" size grade. The smaller of the two is of crystal quartz; the larger core retains some cobble cortex and is milky in color. To the south of the Stuckey Tract in the fishing lake study area examined by SAS, Benson et al. (2001) recovered several small quartz bipolar cores. Noting the abundance of locally available lithic (chert) material, they attribute these to ritualistic use, such as scarification, by Middle Woodland peoples. While the cores from the Stuckey Tract were not directly associated with temporally-precise diagnostic materials, the smaller bipolar core was recovered from a shovel test also containing a single sand/grit tempered plain sherd, indicating a general Woodland or Mississippian association. The larger core was recovered from a site which also contained a Woodland/Mississippian ceramic, yet it was not from the same provenience as the sherd. However, several quartz bipolar flakes were recovered in association with Middle Woodland Swift Creek materials from Test Unit 1 at 9BY51, supporting Benson et al.'s (2001) temporal association.

As expected, the proportion of cores decreases as size decreases. The majority of the cores from the project area are relatively large, with approximately 64% of them falling within the 1.5" size grade and 24% within the 1.0" category. The size distribution almost certainly relates to the relationship between core size and potential flake size. Cores were typically used to supply flakes for tools, and the effectiveness of flake tools is partially related to flake size. Within the Stuckey Tract, the vast majority of utilized flakes are 0.5" in size, and there is evidence at 9BY51 that Late Archaic peoples were intentionally producing uniformly-sized flakes which fall into the 0.5" size class. The high proportion of cores in the 1.5" category suggests that the reduction of cores below this size threshold was not an effective means of producing flakes of a large enough size for practical use. It is likely that many of the smaller 1.5" cores represent discarded items, while the larger 1.5" specimens still contain flake-generating potential. While knapping experiments were not conducted to explore this issue, the data suggest that the size threshold below which the ability of cores to yield flakes of useful size lies somewhere between the 1.5" and 1.0" size grade.



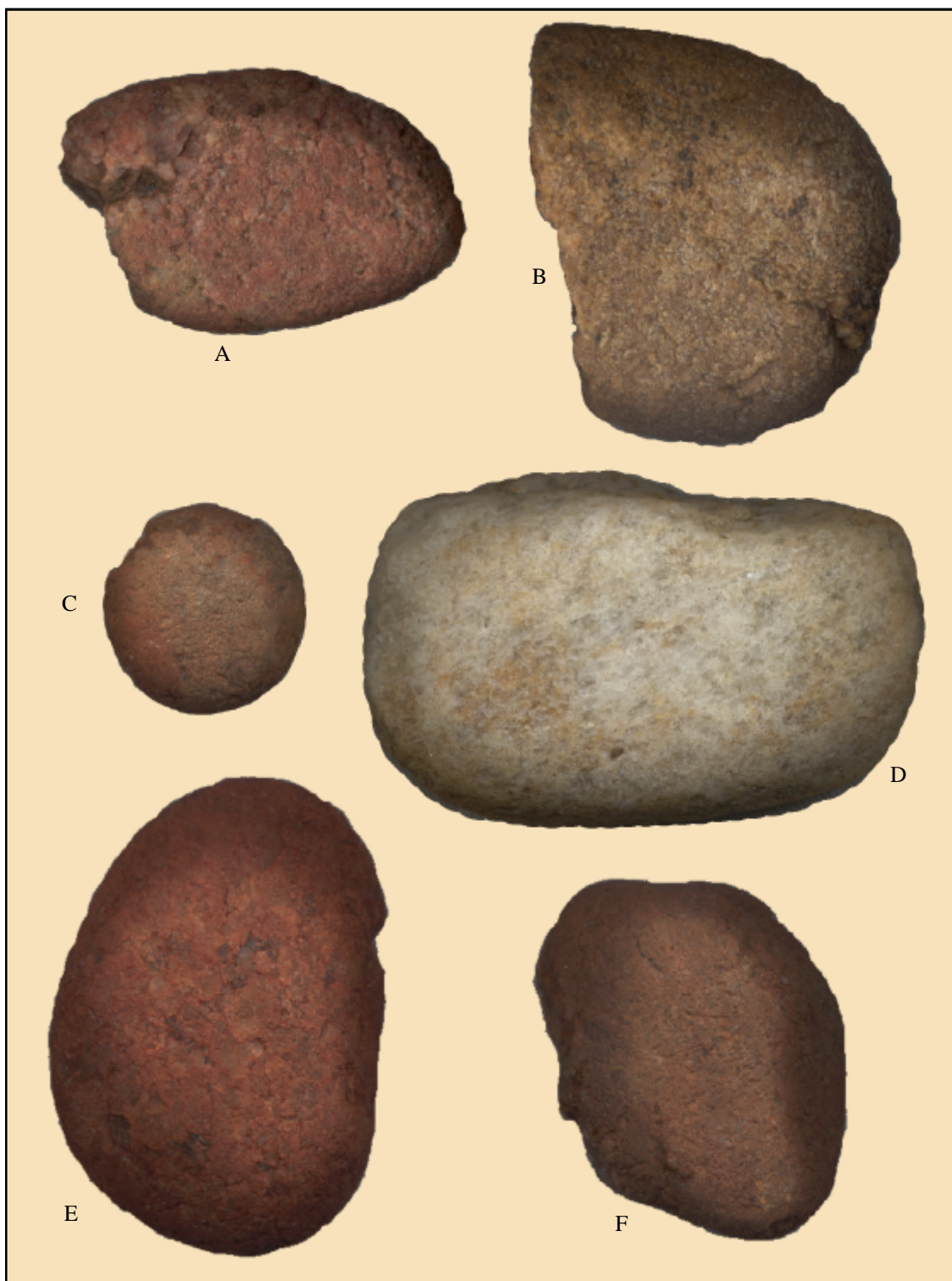


Figure 33. Hammerstones, Quartzite. A-B, 9BY57 surface; C, 9BY55 surface; D, 9BY56 surface; E-F, 9BY65 surface.  
Scale is 1:1





Figure 34. Cores and Core Tools. A, Bifacial core, CPC, 9BY41 surface; B, Bipolar core, quartz, 9BY51 ST G88Z; C, Bipolar core, quartz, 9BY53 ST A228Z; D, Core tool, possible chopper, CPC, 9BY37 surface; E-G, Bifacial core tools, CPC, 9BY43 surface; H, Unifacial core tool, CPC, 9BY65 surface. Scale is 1:1

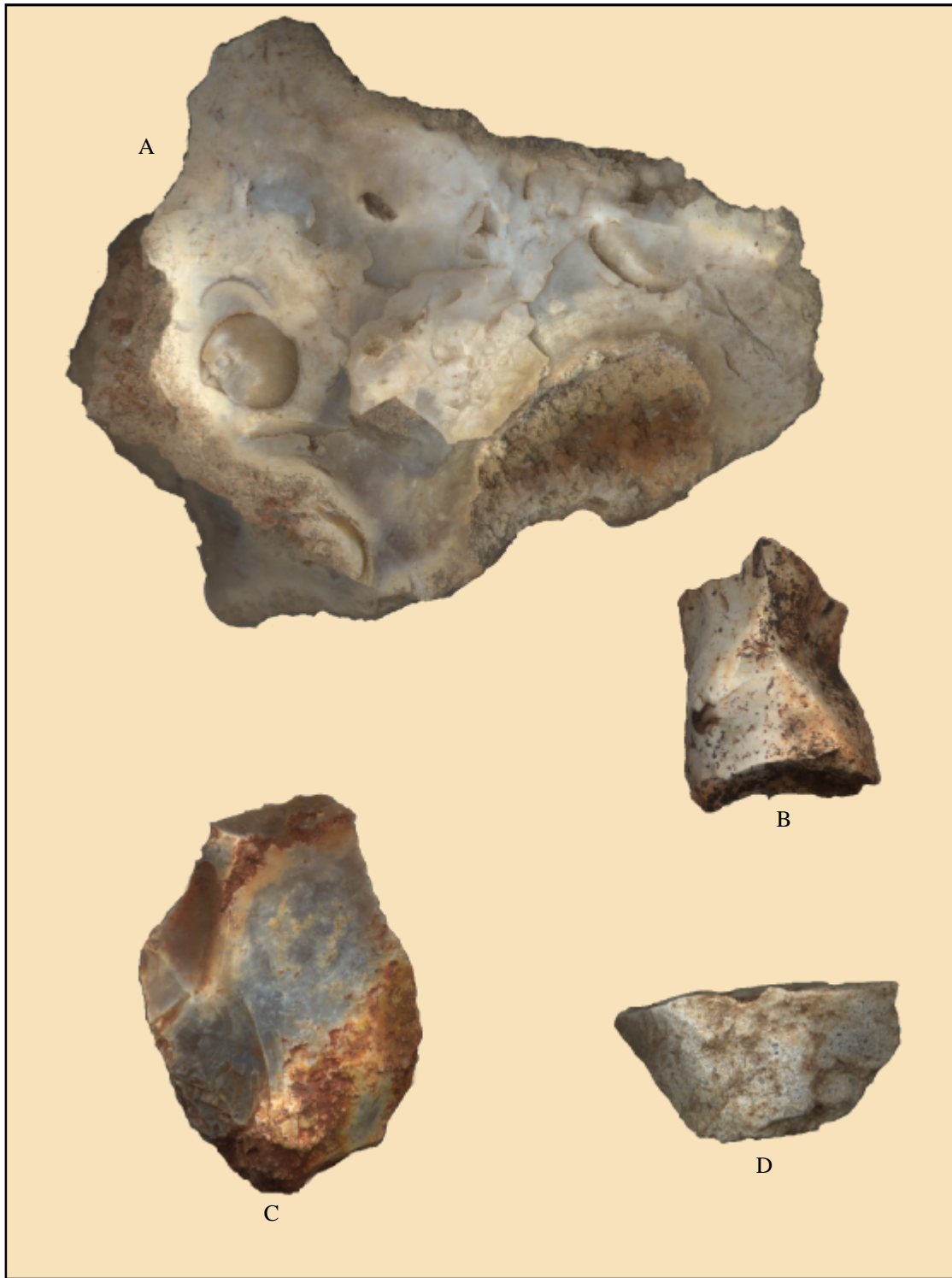


Figure 35. Cores. A, Other core, CPC, 9BY37 ST F613Z; B, Other core, CPC, 9BY41 surface;  
C, Other core, CPC, 9BY50 surface; D, Other core, quartzite, 9BY51 ST D130Z.  
Scale is 1:1



Figure 36. Cores. A, Other core, HCPC, 9BY51 TU1 Lv.9; B, Other core, CPC, 9BY56 surface;  
C, Other core, CPC, 9BY56 surface.  
Scale is 1:1

Table 5. All Cores.

	Size	CPC	HCPC	Quartz	Quartzite	Total	
Random/other	1.5"	40	3			43	64
	1.0"	12	2		1	15	
	0.5"	4	1	1		6	
Core tool	1.5"	11				11	17
	1.0"	4				4	
	0.5"	1	1			2	
Bipolar	1.0"		1			1	3
	0.5"			1		1	
	0.25"			1		1	
Total		72	8	3	1	84	

At 9BY56, several cores were recovered and observed which are extremely large, each measuring over half a kilogram in weight. No chert outcrop was identified at this Late Archaic site; however, chert outcrops (and quarries) were identified just upslope at 9BY55 and on the next ridge over at 9BY65. While chert of this quality was not observed at 9BY55, this was precisely the type of material identified at 9BY65. The distance among any of these locations is less than 300 m, only a few minutes walk (in open woods). A core essentially represents a portable micro-quarry, in that the chert source was always available via its portability. Cores are often implicitly considered to be manuports; that is, they are carried on the knapper's person in order to meet situational demands, and can be carried for a substantial length of time and/or distance with negligible energy expenditure. They are not usually considered "site furniture", in Binford's (1978, 1979) terms. However, several of the cores from this site are large and unwieldy, indicating that they were cached for multiple and long-term use, rather than carried on the person. Based on the size of these cores, a knapper could have exploited them for a good length of time. Perhaps, as part of the Late Archaic settlement strategy, such large and unwieldy chert cores were intentionally left behind when the site was abandoned. Upon return, the occupants restocked their toolkits. When these 'micro-quarry' cores were exhausted, new ones were acquired from the sources upslope and brought to the site. The large flake scars on these cores indicate that the flakes from such cores could have served as portable cores themselves or could have been fashioned into bifaces.

#### EXPEDIENT TOOLS

An examination of the expedient tools (Table 6; Figure 37) from the project area reveals that, not unexpectedly, nearly all

of them are manufactured from chert. Chert expedient tools are almost equally divided into unheated and heated forms, with a slightly higher frequency of unheated chert tools. Simple utilized flakes are the most common type, accounting for approximately 77% of the assemblage. The next most common type, the informal unifacial flake tool, accounts for approximately 16% of the assemblage. Examples of these two types range in size from 1.5" down to 0.25". Several graters were recovered, all of which fall into the 0.5" size class, and a single small (0.25") heated chert perforator is present as well. Other modified flakes include specimens which did not fit any of the other categories, but had been utilized or lightly retouched for use as tools.

Over 75% of the expedient tools fall within the 0.5" size grade; following this, 13% fall within the 1.0" size class, 9% within the 0.25" size grade, and 2% within the 1.5" size grade. Clearly, there was an intentional selection of flakes within the 0.5" size grade for use as tools. This may be because flakes in this size range are the optimal size for use, providing a large enough surface area for hand-holding or hafting, as well as providing a useable edge of sufficient length and/or thickness. Generally, flakes above this size range may have been too bulky, while those below this size range simply were not large enough to be effectively hafted or held, did not provide a long or thick useable edge, and generally were not functionally effective for common tasks. However, this does not imply that large and small (i.e., non-0.5") flakes were not effective for their intended purposes; such flakes may have been used for more specialized tasks.

Table 6. All Expedient Tools.

	Size	CPC	HCPC	Quartz	Quartzite	Total	
Unifacial flake tool, informal	1.5”	1				1	45
	1.0”	6	5			11	
	0.5”	16	16			32	
	0.25”		1			1	
Bifacial flake tool, informal	1.0”	1				1	6
	0.5”	1	4			5	
Utilized flake	1.5”	4				4	212
	1.0”	14	10			24	
	0.5”	85	75	1		161	
	0.25”	9	14			23	
Perforator	0.25”		1			1	1
Graver	0.5”	2	4			6	6
Other modified flake	1.5”	1				1	5
	0.5”	1	2			3	
	0.25”				1	1	
Total		141	132	1	1	275	





Figure 37. Expedient Tools. A-C, Utilized flakes, CPC, 9BY51 TU1 Lv.8; D, Utilized blade flake, HCPC, 9BY51 TU1 Lv.8; E, Utilized flake, HCPC, 9BY51 TU1 Lv.9; F, Informal unifacial flake tool, CPC, 9BY51 TU1 Lv.10; G, Informal unifacial flake tool, CPC, 9BY51 ST C101Z; H, Informal unifacial flake tool, HCPC, 9BY51 ST G87Z; I, Informal unifacial flake tool, CPC, 9BY51 surface; J, Informal unifacial flake tool, HCPC, 9BY66 ST 303Z; K, Informal unifacial flake tool, CPC, 9BY77 surface; L, Informal bifacial flake tool, HCPC, 9BY57 ST D214Z; M, Graver, HCPC, 9BY51 TU1 Lv.8; N, Graver, CPC, 9BY51 ST F148Z. Scale is 1:1

## FORMAL TOOLS

As with the expedient tools, formal tools from the Stuckey Tract are almost exclusively made of chert (Table 7; Figures 38 - 42). There are two exceptions, consisting of a Ridge and Valley chert biface fragment and a fragmented quartzite unifacial flake tool; both of these items were likely discarded after retooling. For the formal flake tools, generally there is a preference for unheated chert over heated chert. Conversely, for bifaces (including biface fragments, PPKs, and PPK fragments), there is a general preference for heated chert.

Both temporally diagnostic and non-diagnostic formal stone tools were recovered (see Table 7). Non-diagnostic formal unifacial and bifacial flake tools were very common, as were biface and PPK fragments (Figure 43).

Numerous diagnostic projectile points/knives were recovered from the area, ranging in age from the Early Archaic to the Mississippian period (Figures 44 and 45). Table 8 provides summary data for the identifiable specimens.

*Early Archaic PPKs:* Three PPKs were recovered which appear to have been produced during the Early Archaic period (see Figure 44 a, b, and c). Each of these points generally fit the type descriptions for Kirk Stemmed/Serrated points. Two of the examples from the Stuckey Tract are serrated. These two artifacts were recovered from the surface at neighboring sites (9BY65 and 9BY69). The third specimen is smaller than the other two and does not have a serrated blade. This arti-

fact was recovered from between 90 and 100 cmbs (Level 10) in Test Unit 1 at 9BY51, below the Late Archaic remains. Stemmed Kirk points are believed to post-date the more common Kirk Corner-notched type, which were produced in the latter portion of the Early Archaic period; they appear to be a transitional point style between corner-notched forms and Middle Archaic stemmed forms. Justice (1987:84) believes the Kirk Stemmed/Serrated style was produced from 8900 to 8000 YBP, while Powell (1990) and Coe (1959, 1964) situate them between 8000 and 7000 YBP.

*Late Archaic PPKs:* Stemmed Late Archaic PPKs were the most common PPK type in the Stuckey Tract, with five examples having been recovered (see Figure 44). (Additionally, numerous non-typable PPK distal fragments – i.e., blades – were recovered which exhibit characteristics suggestive of large Late Archaic manufacture). Types recovered include Kiokee Creek, Abbey, Putnam, Bascom, and Savannah River. Two of the points – the Savannah River and the Putnam – were recovered from neighboring proveniences (Test Unit 1 and shovel test C102Z, respectively) at 9BY51. The Putnam was recovered from between 70 and 80 cmbs (Level 8) in the test unit, the level in which the fiber tempered sherds tailed off. Whatley (2002:96) gives a range of 5500 to 3000 YBP for the Putnam style, while Bullen (1975:32) places it within the Florida Archaic Stemmed cluster, with a date range of 7000 to 3000 YBP. The Savannah River style is believed to generally have been produced from 4150 to 3800 YBP (Sassaman 1995:57). The other three points were each recovered from the surface. The Bascom and Abbey PPKs were recovered

Table 7. All Formal Tools.

	CPC	HCPC	RVC	Quartzite	Total
Unifacial flake tool, formal	16	6		1	23
Unifacial chopping/cutting tool	1	1			2
Bifacial flake tool, formal	7	2			9
Bifacial chopping/cutting tool	1	1			2
Biface fragment	10	16	1		27
PPK	6	10			16
PPK fragment	9	15			24
Formal sidescraper	1	1			2
Formal endscraper	1				1
Early stage preform	1				1
Total	53	52	1	1	107

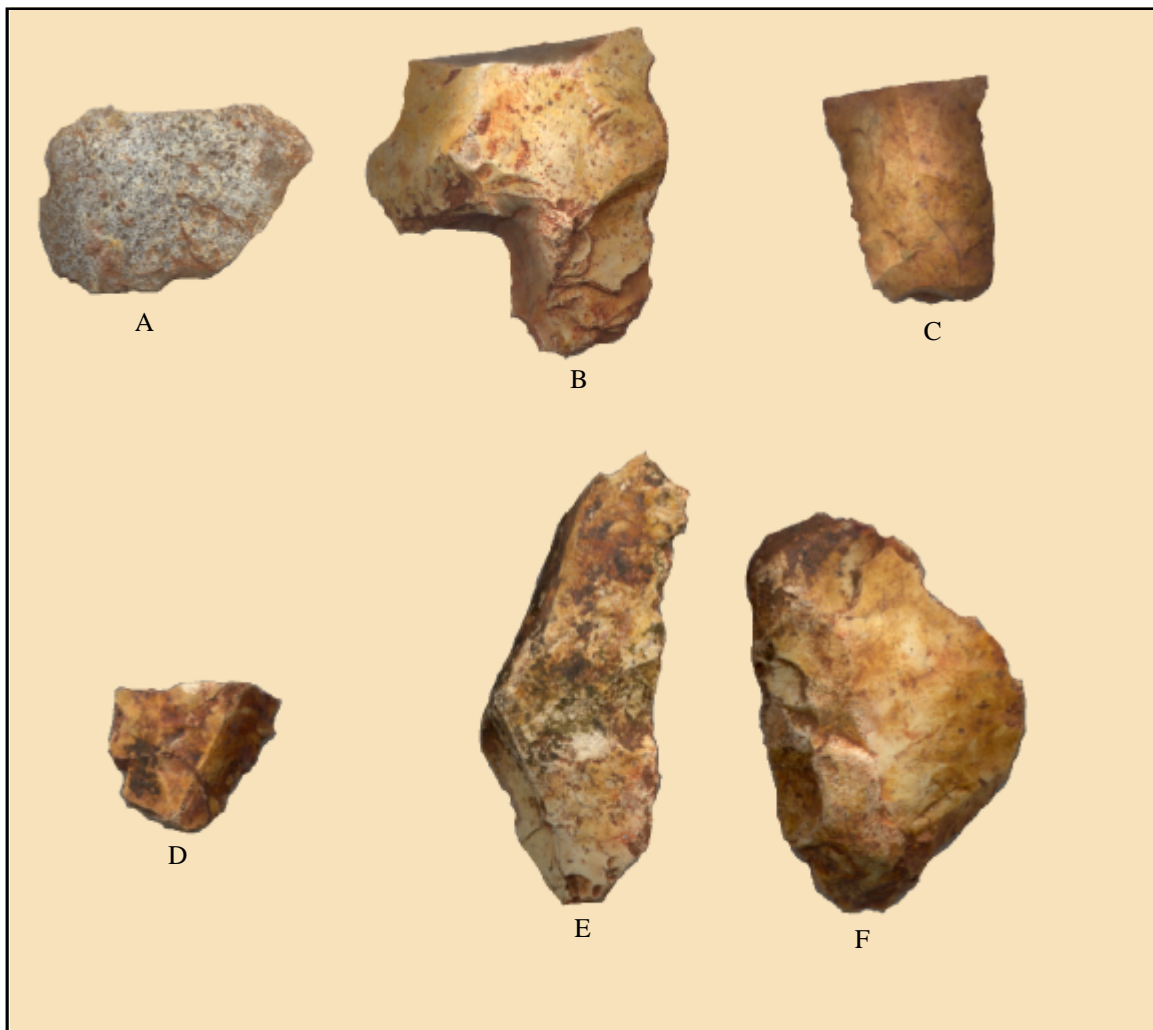


Figure 38. Formal Tools. A, Formal unifacial flake tool, quartzite, 9BY35 surface;  
B-F, Formal unifacial flake tools, CPC, 9BY37 surface.  
Scale is 1:1.

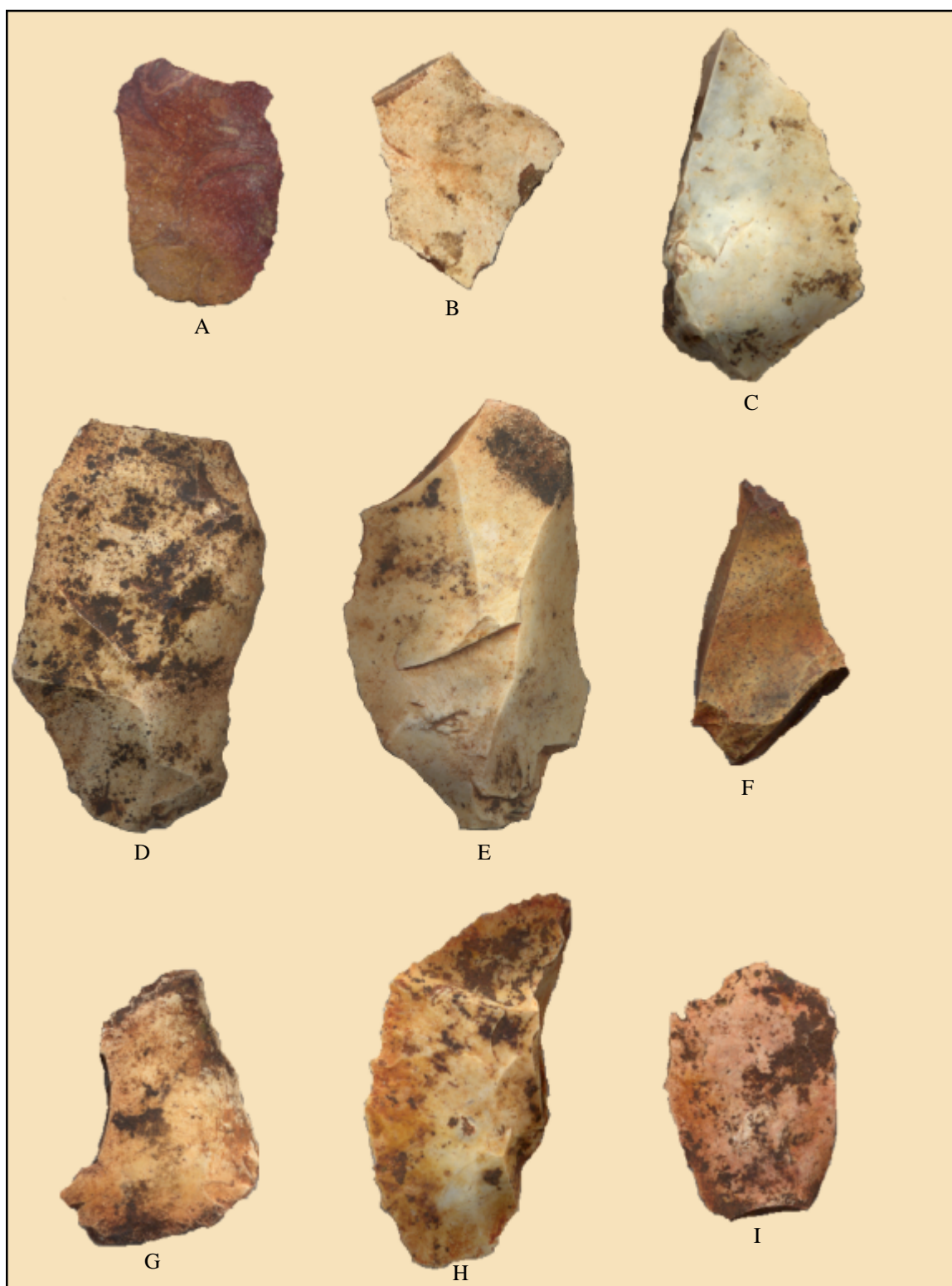


Figure 39. Formal Tools. A-C, Formal unifacial flake tools, HCPC, 9BY41 surface;  
D-I, Formal unifacial flake tools, CPC, 9BY41 surface.  
Scale is 1:1

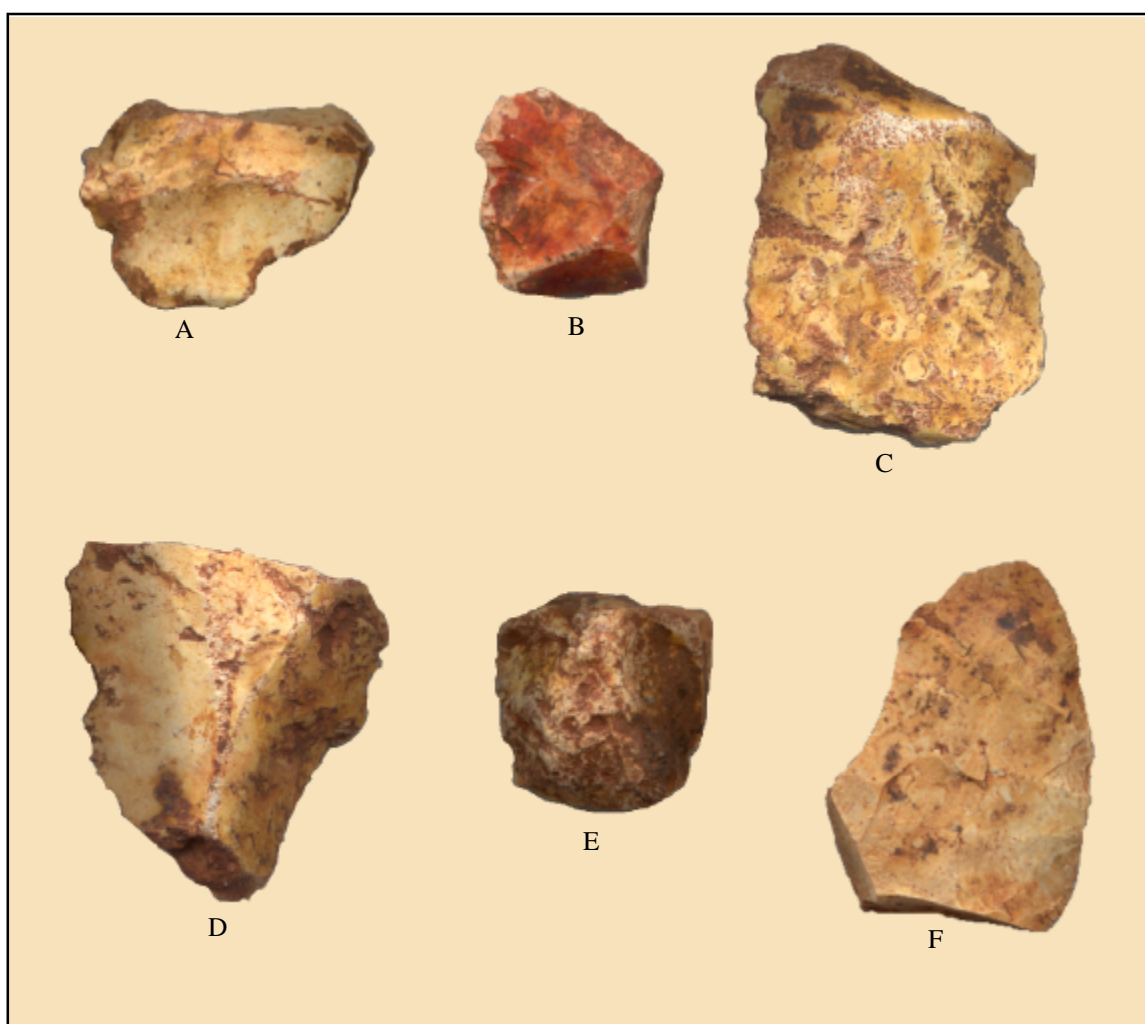


Figure 40. Formal Tools. A-D, Formal bifacial flake tools, CPC, 9BY37 surface; E, Formal endscraper, CPC, 9BY37 surface; F, Formal bifacial flake tool, CPC, 9BY41 surface.  
Scale is 1:1



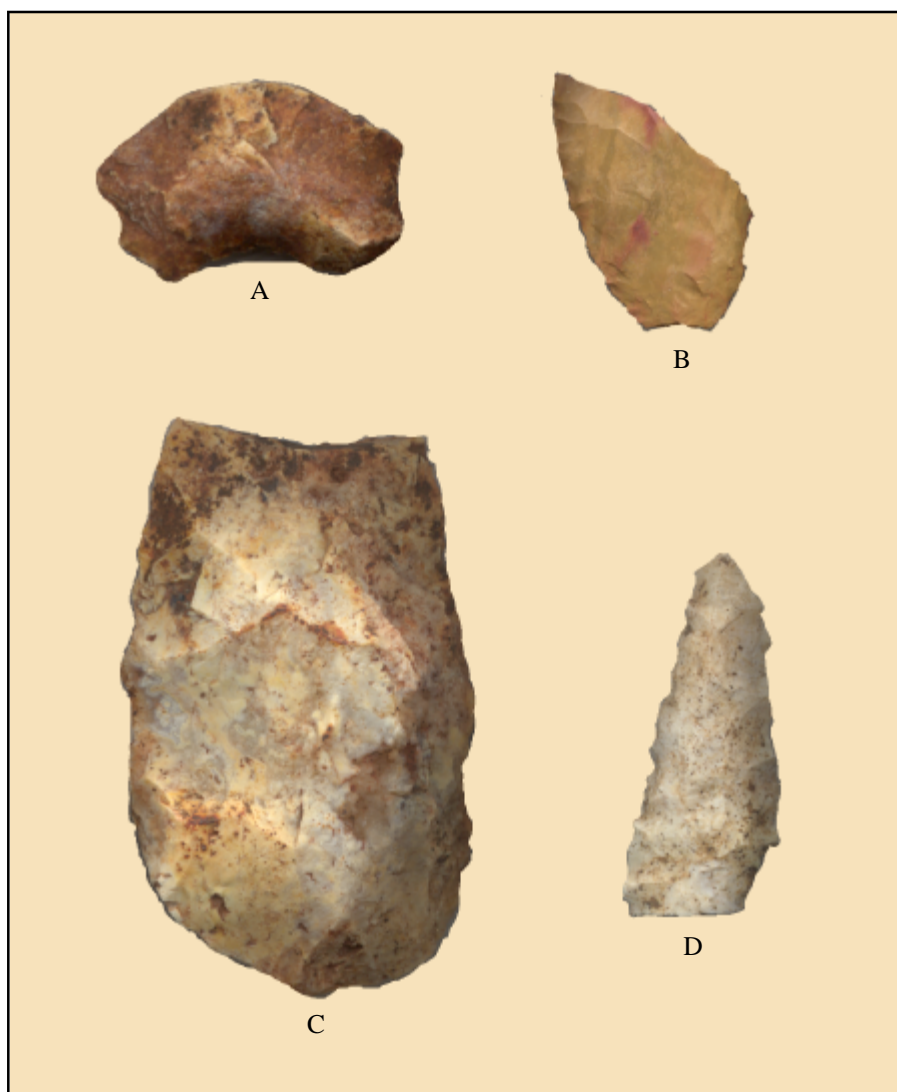


Figure 41. Formal Tools. A, PPK fragment, CPC, 9BY37 surface; B, PPK fragment, HCPC, 9BY37 surface; C, Early stage preform, CPC, 9BY37 surface; D, PPK fragment, HCPC, 9BY41 surface.  
Scale is 1:1



Figure 42. Formal Tools. A, PPK fragment, HCPC, 9BY46 ST G73Z; B, PPK fragment, HCPC, 9BY51 TU1 Lv.1; C, Biface fragment, HCPC, 9BY51 TU1 Lv.3; D, PPK fragment, HCPC, 9BY51 TU1 Lv.4; E, PPK fragment, possible Small Sav. River stem, HCPC, 9BY51 TU1 Lv.5; F-G, PPK fragments, blade, Mid-Late Archaic, CPC, 9BY51 TU1 Lv.6; H, Formal bifacial flake tool, CPC, 9BY51 TU1 Lv.9; I, PPK fragment, CPC, 9BY51 surface. Scale is 1:1

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*Prehistory of the Stuckey Tract, Bleckley County, Georgia*

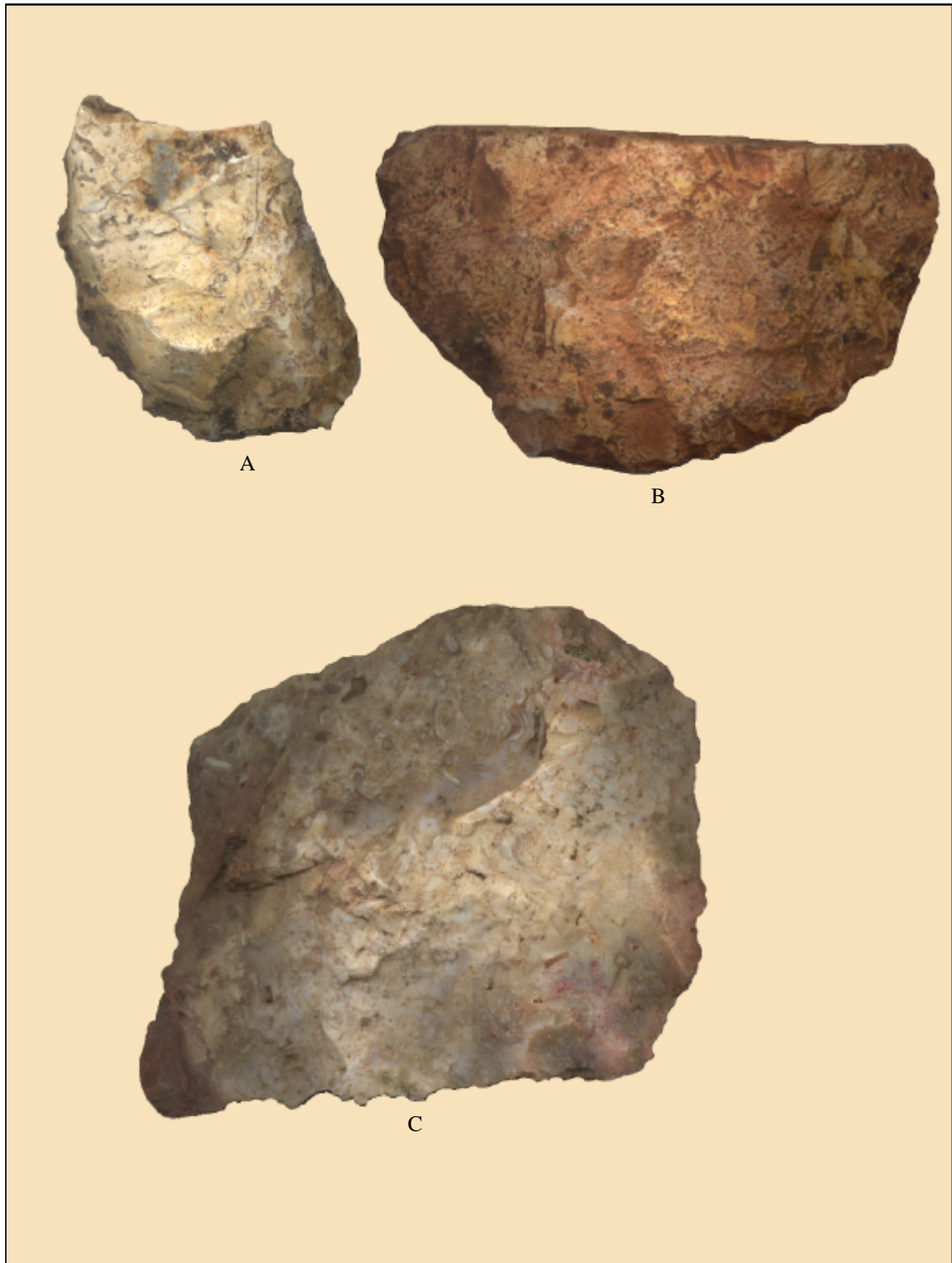


Figure 43. Cutting/Chopping Tools. A, Unifacial, HCPC, 9BY56 surface;  
B, Bifacial, CPC, 9BY37 surface; C, Bifacial, HCPC, 9BY56 surface.  
Scale is 1:1

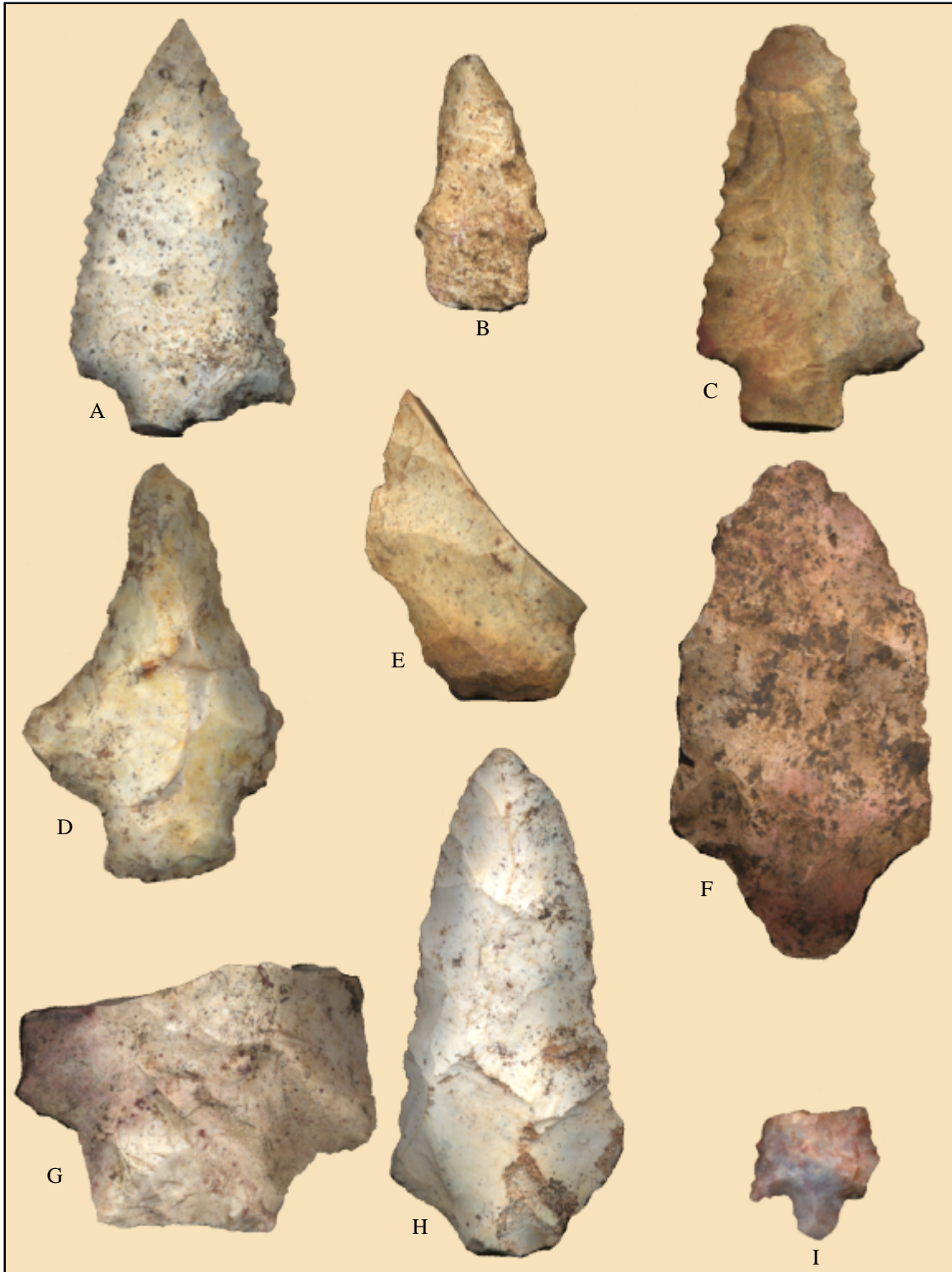


Figure 44. Stemmed PPKs. A, Contracting stem PPK, Kirk Serrated, CPC, 9BY69 surface; B, Straight stem PPK, Kirk Stemmed, CPC, 9BY51 TU1 Lv.10; C, Straight stem PPK, Kirk Serrated, HCPC, 9BY65 surface; D, Straight stem PPK, Abbey, CPC, 9BY37 surface; E, Contracting stem PPK, Kiokce Creek, CPC, 9BY41 surface; F, Contracting stem PPK, Putnam, HCPC, 9BY51 TU1 Lv.8; G, Contracting stem PPK, Savannah River, HCPC, 9BY51 ST C102Z; H, Contracting stem PPK, Bascom, CPC, 9BY37 surface; I, Contracting stem PPK, Thelma, HCPC, 9BY55 surface. Scale is 1:1

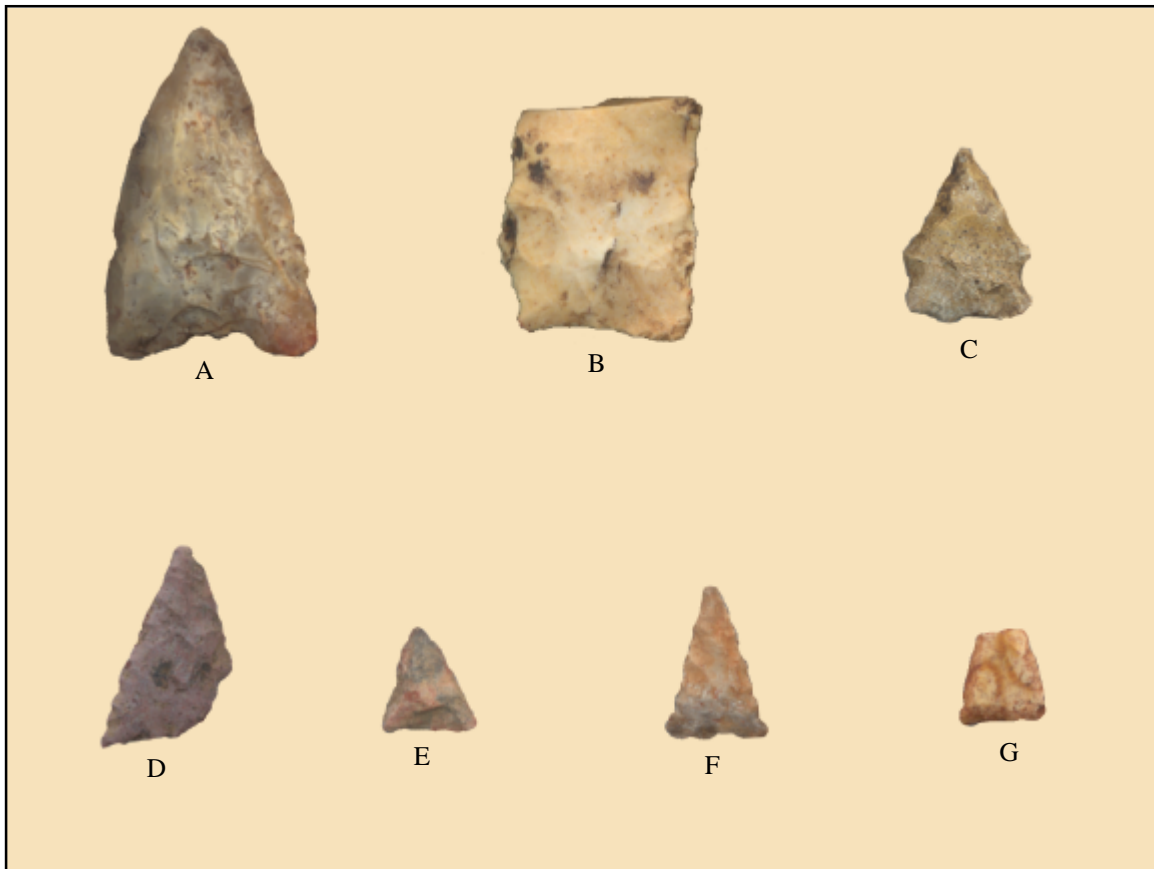


Figure 45. Lanceolate and Triangular PPKs. A, Large triangular PPK, Yadkin, HCPC, 9BY43 surface; B, Lanceolate PPK, base, HCPC, 9BY77 surface; C, Side-notched PPK, HCPC, 9BY51 TU1 Lv.3; D, Small triangular PPK, HCPC, 9BY51 ST D197Z; E, Small triangular PPK, HCPC, 9BY57 ST D215Z; F, Small triangular PPK, HCPC, 9BY65 surface; G, Small triangular PPK, HCPC, IF G121Z.  
Scale is 1:1



Table 8. Projectile Point/Knife Summary.

Site	Form	Material	Measurement in mm. (LxWxTh.)	Type/temporal Affiliation	Comments	Figure reference
9BY69	Contracting stem	CPC	67x38x11	Kirk Stemmed/Serrated/ late Early Archaic	Stem is snapped	44 a
9BY51	Straight stem	CPC	41x21x9	Kirk Stemmed/late Early Archaic		44 b
9BY65	Straight stem	HCPC	64x36x8	Kirk Stemmed/Serrated/ late Early Archaic		44 c
9BY37	Straight stem	CPC	67x43x12	Abbey/Late Archaic	Broken in three pieces – mended;	44 d
9BY41	Contracting stem	CPC	?x?x9	Kiokee Creek/ Late Archaic	Proximal portion	44 e
9BY51	Contracting stem	HCPC	80x43x11	Putnam/Late Archaic		44 f
9BY51	Contracting stem	HCPC	?x58x12	Savannah River/ Late Archaic	Proximal portion – lateral snap; wide stem	44 g
9BY37	Contracting stem	CPC	82x39x13	Bascom/Late Archaic		44 h
9BY55	Contracting stem	HCPC	?x22x6	Thelma/ Early Woodland	Proximal portion; small	44 i
9BY43	Large triangular	HCPC	43x31x13	Yadkin/ Early-Middle Woodland		45 a
9BY77	Lanceolate	HCPC	?x27x7	?Woodland?	Slightly concave base, not ground or fluted	45 b
9BY51	Side-notched	HCPC	23x11x5	?/Late Woodland – Mississippian? Early Archaic?	Very small; found in upper level of Test Unit 1	45 c
9BY51	Small triangular	HCPC	22x?x3	Hamilton/Madison/ Late Woodland- Mississippian	possibly made from earlier blade; found in midden at 9BY51	45 d
9BY57	Small triangular	HCPC	14x12x4	Hamilton/Madison/ Late Woodland- Mississippian		45 e
9BY65	Small triangular	HCPC	20x13x3	Hamilton/Madison/ Late Woodland- Mississippian		45 f
IF G121Z	Small triangular	CPC	?x11x3	Hamilton/Madison/ Late Woodland- Mississippian	Isolated artifact, tip missing	45 g

from 9BY37, although not in association; the Kiokee Creek point was recovered from the adjoining ridge to the north at 9BY41. The Abbey type is estimated to date to between 5500 and 3500 YBP (Powell 1990:32); in Dawson County in northern Georgia, Webb (1998:187) believes they were in use from approximately 4900 to 4500 YBP. The Bascom PPK type is estimated to range in age from 4100 to 3900 (Whatley 2002:97). At the Lover's Lane site in Augusta, Elliott et al. (1994:225) dated the Kiokee Creek form between 3838 and 3358 YBP.

*Woodland – Mississippian PPKs:* Several Woodland and Mississippian PPKs were recovered, including four small triangular PPKs, one large triangular PPK, and a small contracting stem PPK (see Figure 44). Small triangular PPKs are commonly referred to as Madison (Cambron and Hulse 1975:84), Hamilton (Lewis 1955), Pinellas (Bullen 1975:8), Mississippian Triangular (Whatley 2002:79-80), and Late Woodland Triangular (Whatley 2002:64-5). The small triangular form is generally believed to have been produced from the Late Woodland through the Historic Indian period, although generally the style appears to have fallen out of use by the end of the Middle Mississippian period. Two of the examples were recovered from shovel tests (D197Z and D215Z) at Site 9BY51 containing plain and Vining simple stamped pottery, and another was found on the surface of 9BY65 in association with a dense scatter of Vining simple stamped pottery; the remaining example was an isolated find on the surface.

The large triangular PPK resembles the Yadkin type (see Figure 45 a), a type common in the Piedmont but less so in the Coastal Plain. The Yadkin type is an Early to Middle Woodland type, believed to have been produced from 2500 to 1500 YBP (Whatley 2002:127). This particular example was recovered from the road surface at a quarry site, 9BY43, in association with plain pottery, a unifacial chopping/cutting tool, and debitage.

The small contracting stem PPK was recovered from the road surface of quarry site 9BY55 (see Figure 44 i). This artifact resembles the Thelma type, an Early Woodland type estimated to have been produced between approximately 2700 and 2000 YBP (Whatley 2002:119). This particular example is fragmentary, with the distal portion missing.

*Temporally ambiguous PPKs:* The side notched PPK is quite small, and was recovered from between 20 and 30 cmbs (Level 3) in Test Unit 1 at 9BY51 (see Figure 45 c). This level contained numerous Late Woodland – Mississippian ceramics and related materials. While side notched PPK forms are most often linked to Early Archaic peoples (e.g., Bolen, Big Sandy, Taylor), this particular example does not exhibit many of the typical morphological characteristics of such forms. The point is much smaller than a typical Early Archaic side-notched PPK, while the side notches are not as deep. Further, there is no evidence of basal or notch grinding, a characteristic commonly found on Early Archaic types. However, the blade is very slightly beveled, which is quite common for Early Archaic side-notched PPKs. In size and overall form, the PPK is somewhat similar to a small triangular PPK. It may be that this PPK represents a scavenged Early Archaic side notched PPK, recovered and reworked by a Late Woodland – Mississippian site occupant into a form and size reminiscent of a small triangular PPK. Conversely, this artifact may represent an exhausted Early Archaic PPK which was redeposited by cultural and/or natural processes in this upper level. The author tends toward the former case.

A fragmented lanceolate PPK was recovered from the surface of 9BY77, along with a couple of plain sherds (see Figure 45 b). This artifact does not exhibit any of the classic characteristics of Paleoindian lanceolate PPKs such as haft grinding, fluting, or careful and directed flaking. Rather, this artifact is rather crudely-flaked, having an uneven edge along one side. It is suggestive of a late stage PPK preform which broke during production, perhaps representing a large triangular preform. While it cannot be definitively temporally placed, the association with pottery and its morphological characteristics suggest that it was produced during the Early or Middle Woodland period.

## TECHNOLOGICAL ORGANIZATION ANALYSIS OF SELECTED SITES

The lithic assemblages from ten proveniences at nine different sites were chosen for inclusion in the analysis. Table 9 provides a summary of these sites, while Figure 46 shows

Table 9. Assemblages Included in Debitage Analysis.

Provenience	Site Type	Temporal/Cultural Affiliation	Chert outcrop
9BY37	chert quarry	Early Archaic, Late Archaic, Woodland/Miss.	Yes
9BY41	chert quarry	Late Archaic	Yes
9BY43	chert quarry	Early-Middle Woodland	Yes
9BY65	chert quarry, residential	Early Archaic, Late Woodland Vining	Yes
9BY51, TU1 midden	residential	Middle Woodland Deptford, Swift Creek	No
9BY51, TU1 L8	residential	Late Archaic	No
9BY57	residential	Late Woodland Vining, Late Archaic (minor)	No
9BY78	residential	Middle Woodland Swift Creek, Late Woodland Vining	No
9BY56	hunting/extraction locus	Late Archaic, Woodland/Miss.	No
9BY52	hunting/extraction locus	Woodland/Miss.	No

their location. Two of the assemblages from Test Unit 1 of Site 9BY51 were chosen: the midden, consisting of arbitrary Levels 4-6, includes Middle Woodland Swift Creek and Deptford materials, and possibly Late Woodland remains affiliated with Weeden Island, Napier, and Vining components; and Level 8 due to its apparent Late Archaic affiliation and potentially unmixed nature. Several factors went into choosing the assemblages. All of the included assemblages have associated diagnostic artifacts, so that inferences regarding diachronic trends could be made, at least to some degree. Further, I tried to include assemblages representing the different site types (i.e., quarry, hunting/extraction locus, residential). Lastly, but perhaps most importantly, I was limited by the number of assemblages which simply have a large enough artifact frequency to permit inferences to be made. As a caveat, the occupational histories of these sites are only known via the small sample recovered during the survey; of course, unidentified components may be present which could reveal new or dramatically different functions of these sites. Tables 10-13 provide summary information of the selected proveniences included in this study. Percentages of the artifact classes within each site are shown in the parentheses.

An examination of the proportions of chipped stone artifact classes (see Table 10) reveals that debitage is the dominant artifact class for every provenience, regardless of site type. However, the residential sites generally contain the highest proportions of debitage. The midden at 9BY51 contained the highest proportion of debitage, accounting for nearly 98% of the chipped stone artifact assemblage. Debitage proportions at the two hunting/extraction sites is generally high as well. The proportions of debitage at quarry sites is moderate to high, while these sites typically contain the highest proportion of cores when compared to the other site types. This is not unexpected, since cores are commonly produced at material sources. Cores are infrequent at the residential sites. Quarry sites tend to have the highest proportions of both expedient and formal tools, generally with a slightly higher proportion of expedient tools in comparison to formal tools. Residential sites generally have a much higher proportion of expedient tools than formal tools, with the latter generally accounting for less than one percent of the chipped stone assemblages. The two hunting/extraction sites exhibit disparate artifact class proportions, yet this may be accounted for by the generally small artifact sample size of each.

The majority (73.3%) of the expedient tools fall within the 0.5" size grade (see Table 11). Generally, little difference of the size grade proportion is observed among the various site types. However, the residential sites tended to contain a higher

proportion of small (0.25") expedient tools in comparison to quarry or hunting/extraction sites.

As mentioned above, cores are much more common at quarry sites in comparison to the other site types, with generally few recovered from the other two site types (see Table 12). One exception to this is the hunting/extraction locus 9BY56, where only a few ( $n=4$ ) of those observed were collected. (The implications of this site assemblage is discussed below). Most of the cores fall into the largest size grade (1.5"). Interestingly, however, both of the cores recovered from Test Unit 1 at the residential site 9BY51, are relatively small, falling within the 0.5" size grade. Situated in the bottomland, 9BY51 is further from chert sources than any of the other selected study proveniences, which may explain this size difference.

No apparent patterns are observable with respect to site types and the proportions of PPK and biface fragments (see Table 13). The sample is relatively small as well, hindering any meaningful explanations of these proportions. Nevertheless, the proportions of PPK to biface fragments at each of the two study proveniences that yielded over five broken tools (9BY43 and the midden at 9BY51) are roughly the same; the former of these proveniences represents a chert quarry location, while the latter represents a residential location.

For the purposes of the debitage size class linear plots, the <0.25" debitage was not included in the size grade proportions. Since 0.25" screen was used for field recovery, much of the debitage less than 0.25" was theoretically and presumably not recovered. Therefore, including in the analysis the <0.25" debitage which was recovered would skew the size grade proportions, and the graphs would not be a true representation of the actual size grade distribution. Figure 47 shows the linear plot of each assemblage without the <0.25" debitage, while Figure 48 shows the proportions of all size classes within each assemblage, including the <0.25" material.

Based on the linear graphs of the size classes, both bifacial and core reduction modes are present in the archaeological assemblages. Assemblages from 9BY52, 9BY56, 9BY57, 9BY78, and the midden of Test Unit 1 of 9BY51 exhibit the steep, regular concave curves indicative of bifacial reduction, while the remaining assemblages display irregular plots indicative of core reduction. Invariably, assemblages from sites which are situated at or near chert outcrops (9BY37, 9BY41, 9BY43, and 9BY65) are indicative of core reduction, indicating the predominance of core reduction debris.

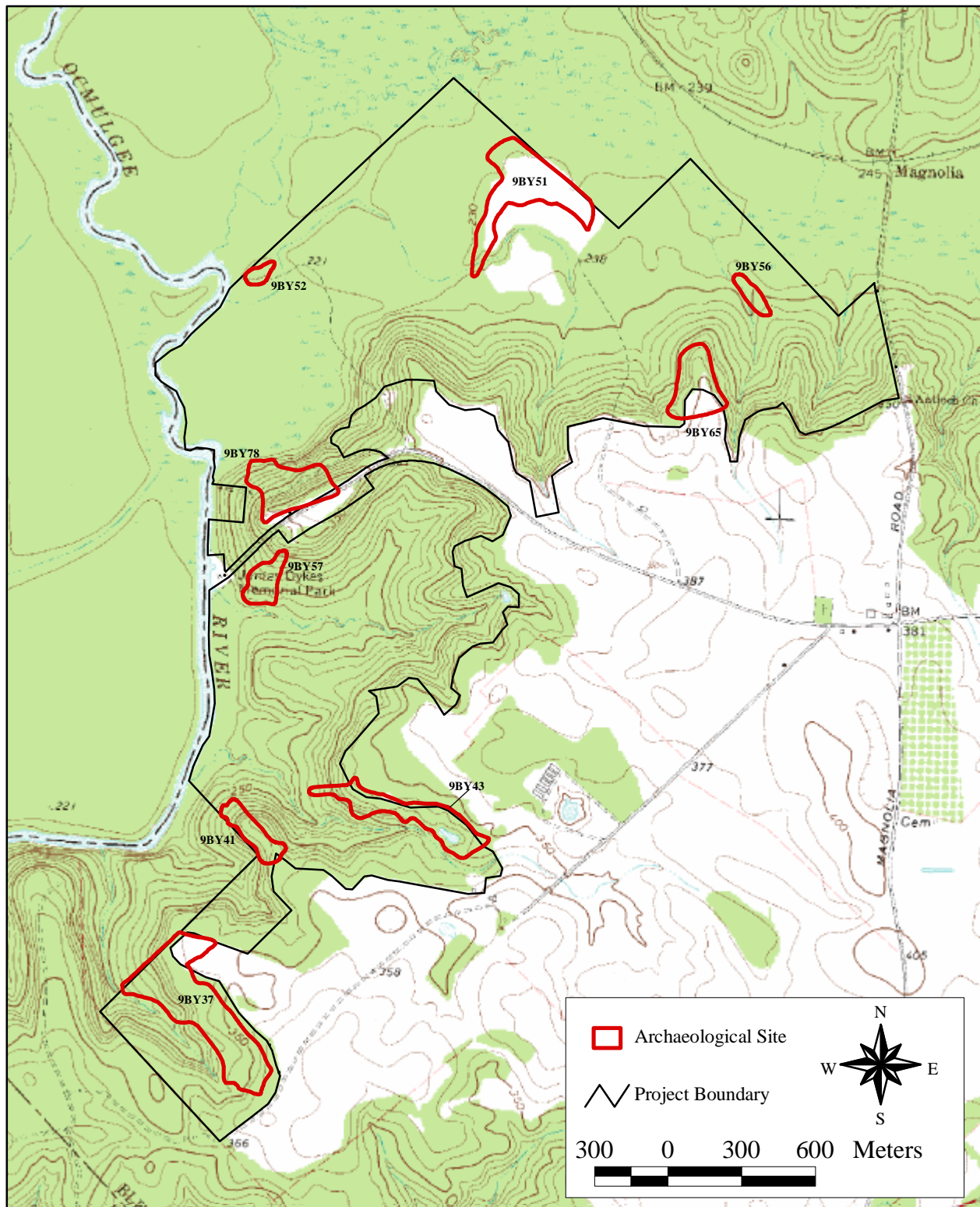


Figure 46. Sites Included in Lithic Organization Analysis.

Table 10. Frequency of Chipped Stone Artifacts within Selected Assemblages.

Provenience	Debitage	Expedient Tools*	Formal Tools**	Cores***	Total
9BY37	170 (70.5)	30 (12.4)	18 (7.5)	23 (9.6)	241
9BY41	48 (55.8)	17 (19.8)	18 (20.9)	3 (3.5)	86
9BY43	70 (64.2)	19 (17.4)	12 (11.0)	8 (7.4)	109
9BY65	62 (79.5)	5 (6.4)	3 (3.8)	8 (10.3)	78
9BY51, TU1 midden	1,544 (97.8)	26 (1.7)	7 (0.4)	1 (0.1)	1,578
9BY51, TU1 L8	101 (84.9)	16 (13.5)	1 (0.8)	1 (0.8)	119
9BY57	430 (94.7)	21 (4.6)	3 (0.7)	0 (0)	454
9BY78	99 (86.8)	14 (12.3)	1 (0.9)	0 (0)	114
9BY56	33 (75.0)	3 (6.8)	4 (9.1)	4 (9.1)	44
9BY52	62 (95.4)	3 (4.6)	0 (0)	0 (0)	65
Total	2,619 (90.7)	154 (5.3)	67 (2.3)	48 (1.7)	2,888

\*includes informal flake tools, utilized flakes, gravers

\*\*includes PPKs, PPK fragments, formal flake tools, bifacial and unifacial chopping/cutting tools

\*\*\*includes core tools

Table 11. Size Distribution of Expedient Tools within Selected Assemblages.

Provenience	1.5"	1.0"	0.5"	0.25"	Total
9BY37	3 (10.0)	4 (13.3)	21 (70.0)	2 (6.7)	30
9BY41	0 (0)	0 (0)	16 (100)	0 (0)	16
9BY43	0 (0)	2 (11.1)	15 (83.3)	1 (5.6)	18
9BY65	1 (20.0)	2 (40.0)	2 (40.0)	0 (0)	5
9BY51, TU1 midden	0 (0)	5 (19.2)	18 (69.2)	3 (11.6)	26
9BY51, TU1 L8	0 (0)	2 (12.5)	14 (87.5)	0 (0)	16
9BY57	0 (0)	4 (19.0)	11 (52.4)	6 (28.6)	21
9BY78	0 (0)	1 (7.1)	11 (78.8)	2 (14.3)	14
9BY56	0 (0)	2 (66.7)	1 (33.3)	0 (0)	3
9BY52	0 (0)	0 (0)	3 (100)	0 (0)	3
Total	4 (2.7)	22 (14.7)	110 (73.3)	14 (9.3)	150



Table 12. Size Distribution of Cores within Selected Assemblages.

Provenience	1.5"	1.0"	0.5"	Total
9BY37	17 (73.9)	5 (21.7)	1 (4.4)	23
9BY41	2 (66.7)	1 (33.3)	0 (0)	3
9BY43	3 (37.5)	3 (37.5)	2 (25.0)	8
9BY65	4 (50.0)	4 (50.0)	0 (0)	8
9BY51, TU1 midden	0 (0)	0 (0)	1 (100)	0
9BY51, TU1 L8	0 (0)	0 (0)	1 (100)	1
9BY57	1 (100)	0 (0)	0 (0)	1
9BY78	0 (0)	0 (0)	0 (0)	0
9BY56	3 (75.0)	1 (25.0)	0 (0)	4
9BY52	0 (0)	0 (0)	0 (0)	0
Total	30 (62.5)	14 (29.2)	4 (8.3)	48

Table 13. Broken Tools within Selected Assemblages.

Provenience	PPK fragment	Biface fragment	Total
9BY37	2 (50.0)	2 (50.0)	4
9BY41	2 (66.7)	1 (33.3)	3
9BY43	4 (66.7)	2 (33.3)	6
9BY65	0 (0)	1 (100)	1
9BY51, TU1 midden	5 (71.4)	2 (28.6)	7
9BY51, TU1 L8	0 (0)	0 (0)	0
9BY57	2 (100)	0 (0)	2
9BY78	0 (0)	1 (100)	1
9BY56	0 (0)	2 (100)	2
9BY52	0 (0)	0 (0)	0
Total	15 (57.7)	11 (42.3)	26

\*excludes fragmentary diagnostic PPKs.

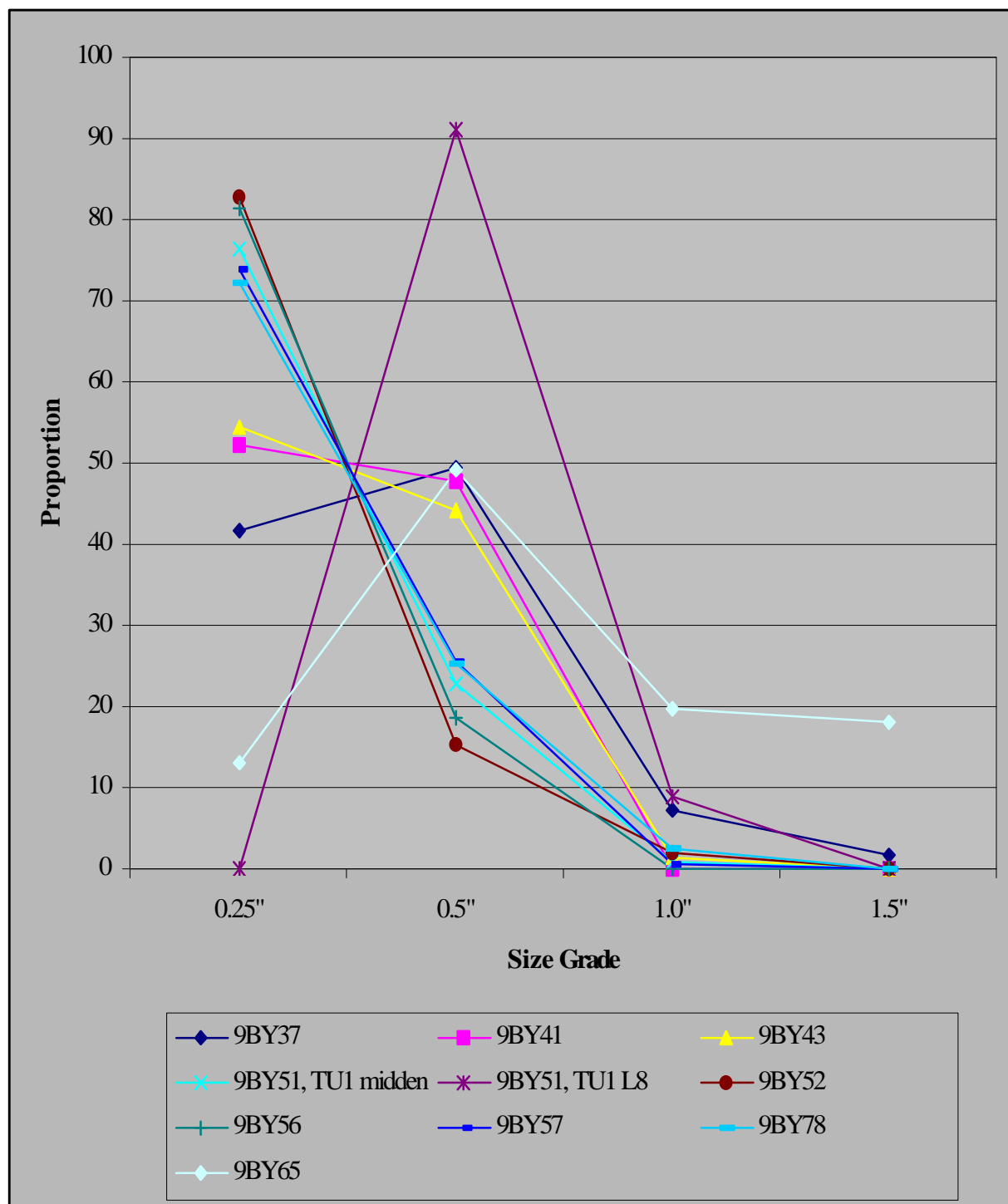


Figure 47. Linear Plots of Debitage Size Class Proportions.

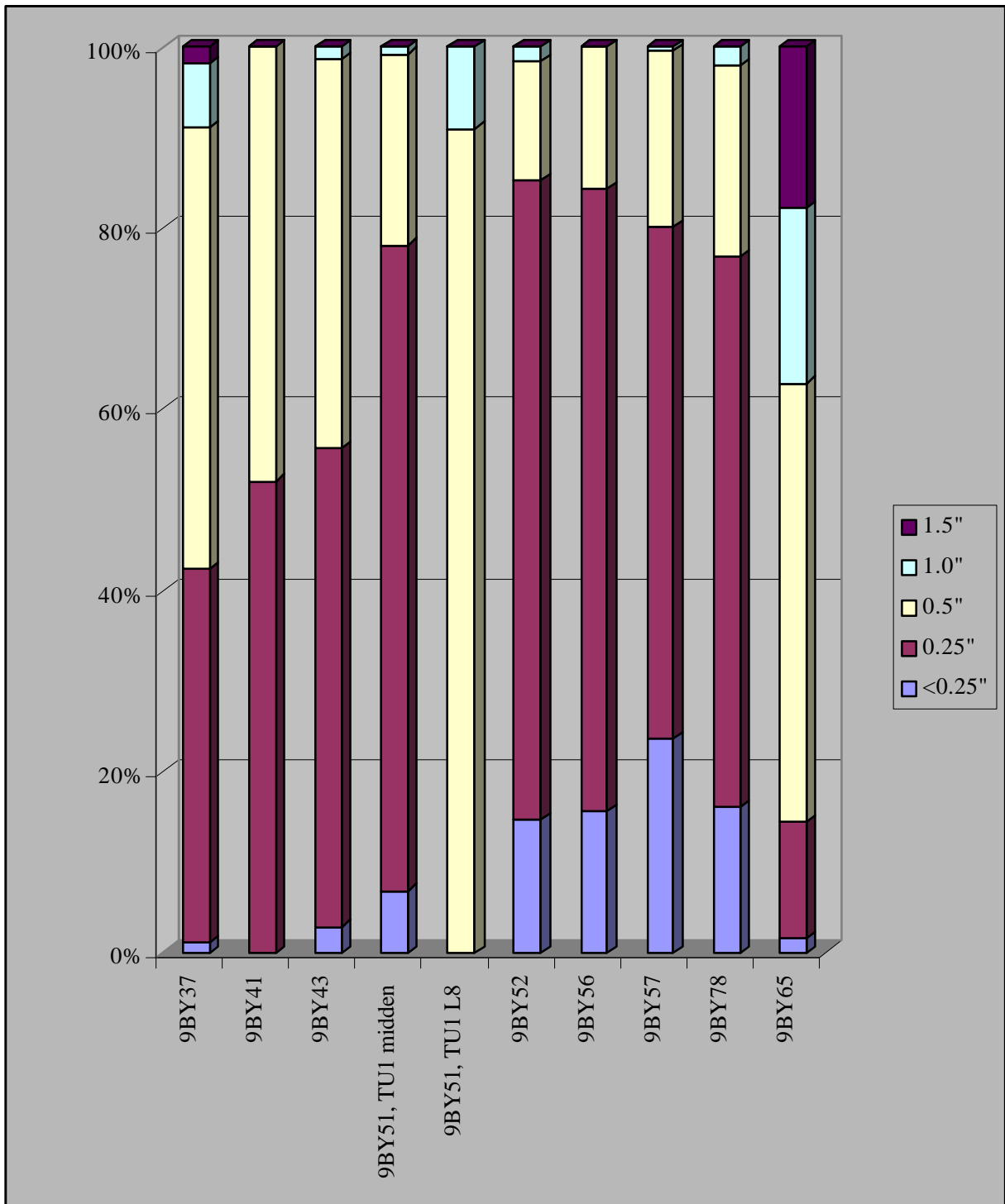


Figure 48. Proportions of Debitage by Size Class.

The most striking and irregular distribution observable on the graph is that of the assemblage from Level 8 of Test Unit 1 of 9BY51. This distribution appears to represent an extremely homogenous and specialized debitage assemblage. Unlike the other core reduction assemblages, a chert source is not nearby; rather, 9BY51 is relatively far from any source. Figure 42 f, a contracting stemmed PPK similar to the Putnam type was recovered from this level, as were a few fiber tempered sherds, indicating a Late Archaic origin for the debitage.

The size grade distribution of the debitage from each level of Test Unit 1 was graphed in order to examine diachronic variation of flaked stone technologies. With the exception of Level 8, each level exhibited a relatively steep concave curve, reflecting the higher proportions of smaller sized debitage and the predominance of bifacial reduction debris. (Since all but one of these graphs are similar, they are not reproduced here). It is interesting that such a disparate distribution as found in Level 8 would occur in a sea of bifacial reduction debris. Almost all of the debitage from this level is 0.5" in size, and none smaller than this size grade are present. This level also contained the highest number of chipped stone tools (n=17) in the test unit, with all but one (the Putnam PPK) representing expedient tools. The expedient tools are dominated by utilized flakes (n=13), and, like the debitage, all but two of these are 0.5" in size (the exceptions are 1" in size). Additionally, all but one of the utilized flakes are of non-heated chert, and four are blade flakes. The other expedient tools consist of a couple of informal bifacial tools and a graver. One core, which also functioned as a tool/scrapper, was recovered from this level, as were two quartzite cobble hammerstones; the levels above and below this one each yielded a single core. This assemblage appears to represent the remains from a relatively brief occupational episode, during which relatively uniformly-sized flakes were struck from cores in order to be used as expedient tools.

Two of the other assemblages which exhibit irregular distributions, 9BY37 and 9BY65, also contain a majority of 0.5" debitage. Overall, it appears that knappers conducting core reduction were intentionally producing flakes to be used as tools which consistently fall within the 0.5" size grade. However, unlike these core reduction assemblages, the other two irregular assemblages, 9BY41 and 9BY43, contain just slightly more 0.25" than 0.5" debris. The distributions of these two assemblages fall roughly between the steep concave curves indicative of bifacial reduction and the more irregular plots. It may be that these distributions are representative of more mixed assemblages, containing both bifacial and core reduction debris, rather than more "pure" assemblages consisting of debitage predominately from one of the two reduction modes.

Interestingly, at 9BY56, where several cores were collected (from the many scattered about the surface), the distribution indicates that the assemblage represents bifacial reduction debris. Given the presence of the cores, one would assume that the linear graph of the assemblage would yield an irregular curve indicative of core reduction debris. However, there are several other clues that are suggestive of Late Archaic bifacial reduction activities at the site. First, the size of most of the cores collected and observed are very large, and they typically exhibit very large flake scars. As discussed above, many of these cores are believed to have been too large for personal transport (apart from the movement to the site from the source upslope), and instead are thought to represent cached material at the site. Secondly, this is only one of two of the ten assemblages in this study which have fewer expedient tools (n=3) than formal tools (n=4), and, when compared to the other assemblages, this is a low number of expedient tools. Of the four formal tools, two are biface fragments. All of this indicates that the production of expedient tools from cores was not a primary activity at this site, as it was at Level 8 at 9BY51. Rather, the large flake scars on the cores likely represent the production of flake blanks to be used for biface production; the biface fragments at the site also attest to bifacial production. An alternative explanation for the bifacial distribution of the 9BY56 assemblage would simply be that the bifacial reduction debris do not remain from the Late Archaic component, but rather from a different component - a single unidentified stamped ceramic was recovered from the site indicating a Woodland or Mississippian presence.

Indeed, of the assemblages exhibiting bifacial reduction distributions, all of them contain Woodland and/or Mississippian components. Remembering that an unknown portion of debitage less than 0.25" in size was not recovered due to the use of 0.25" screen for field recovery, the overwhelming majority of debitage within these assemblages is small in size, with 0.25" and <0.25" debitage accounting for between 75 and 85 percent of the totals (Figure 49). Likewise, in comparison with the core reduction assemblages, the amounts of larger debitage in the bifacial reduction assemblages are much less, with 0.5" debitage making up between 12 and 20 percent. At 9BY57, where the primary component is a Vining phase occupation, <0.25" debitage accounts for nearly 25% of the total, while only two pieces of large debitage (i.e., 1" or greater) were recovered. Additionally, over 75% of the chert debitage at this site has been heat-treated (Figure 50). This assemblage appears to be primarily from intensive late stage reduction and tool maintenance activities. A small triangular PPK was found in one of the shovel tests along with a large amount of small-sized debitage, indicating that much of the

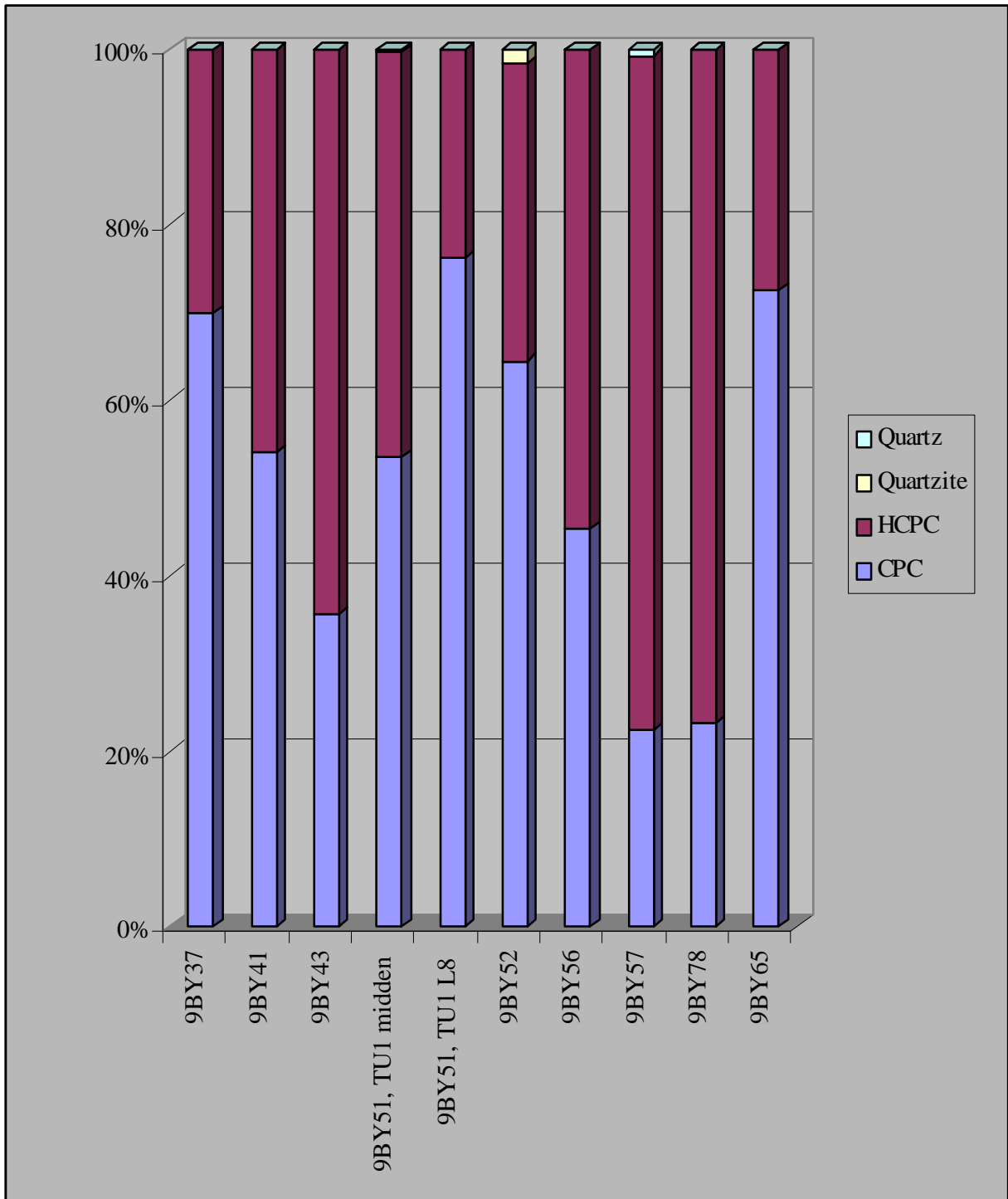


Figure 49. Proportions of Debitage by Material Type.



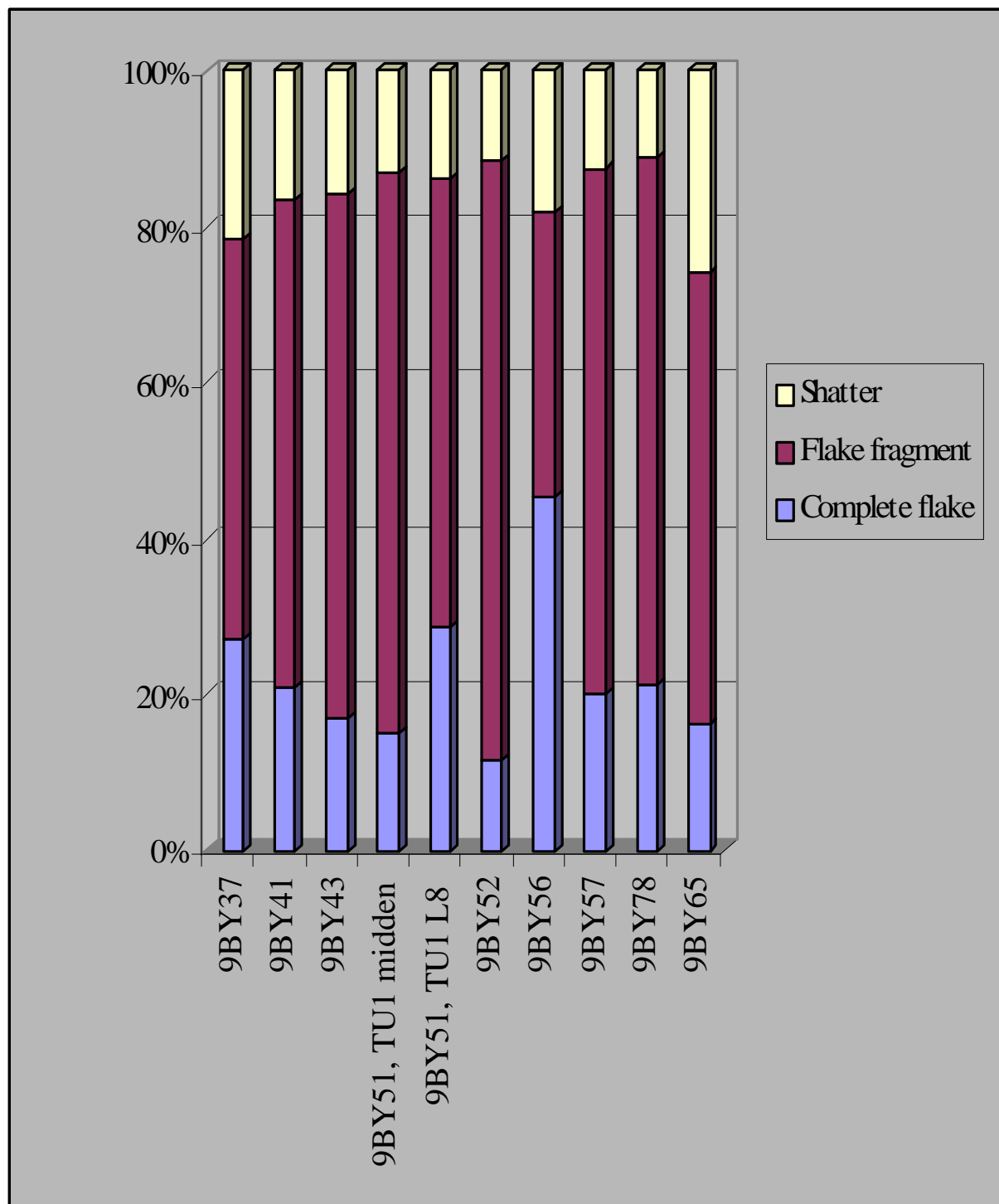


Figure 50. Proportions of Debitage by Type.

bifacial reduction debris found on the late prehistoric sites probably results from production and maintenance of such [small] PPKs.

Chert dominates the assemblages, and other materials are present in very minor frequencies on just a handful of sites. (The very small number of specimens of Ridge and Valley chert, metavolcanic, and unidentified chert were excluded from this particular analysis). Quartz and quartzite were recovered from 9BY52, 9BY57, and the midden within Test Unit 1 at 9BY51; all of these assemblages are associated with late prehistoric ceramic-era occupations, although the data prevents a more precise cultural or temporal affiliation for these minority materials.

In terms of the chert debitage, heated specimens outnumber unheated specimens on six of the ten sites examined. Interestingly, one of the sites having a majority of heated debitage, 9BY43, contains chert outcrops, and the linear plot of the debitage size classes indicates that the assemblage represents core reduction. Generally, heat alteration of chert occurs after early stage reduction, so why is the assemblage dominated by heated debitage? An examination of the cores from the site reveals that seven of the eight are of unheated chert, so debitage from the production and reduction of such cores should be unheated as well. Unheated chert debitage is almost equally divided between 0.5" and 0.25" size classes, while the majority of the heated debitage falls within the 0.5" size grade. Of the expedient tools, half (n=9) are of heated chert, and all of these are in the 0.5" size class; most of the unheated chert tools also fall within the 0.5" size grade while the remaining are 1.0" and 0.25" in size. These data indicate that flakes were struck from unheated cores, and suitable 0.5" specimens were then selected for heat-treatment and subsequent use as expedient tools. Alternatively, it very well may be that the assemblage from 9BY43 represents a range of disparate and unrelated lithic strategies. While a Yadkin PPK and a small number (n=7) of unidentified Woodland and/or Mississippian sherds were recovered from the site, no evidence of residential occupation was found; rather, the site appears to have functioned primarily as a chert and/or resource extraction location. 9BY43 is an extremely large site, and it is likely that other occupations are partly responsible for the artifact assemblage; attributing the lithic organizational strategy evidenced at the site solely to the Early-Middle Woodland Yadkin component is problematic and impractical.

An examination of the amounts of unheated to heated chert debitage in relation to reduction mode indicates that there is no strong preference for one form of the material over the

other for bifacial reduction. Three of the five bifacial reduction assemblages contain a greater proportion of heated than unheated chert. However, within two of these three bifacial assemblages, 9BY57 and 9BY78, heated chert far outnumbers unheated chert, with HCPC accounting for nearly 80% of the debitage; the primary components at both of these sites are Vining phase residential occupations. In terms of core reduction, four of the five assemblages contain a greater proportion of unheated than heated chert, which is to be expected given the early stage reduction of newly-acquired chert. Technologically, heating blocky and thick chunks of chert is typically not effective in producing uniform alteration; pockets of moisture in such a piece could cause it to shatter. Rather, heat-treatment was typically done on thinner specimens, such as flake blanks and bifaces, where heating resulted in a much more uniform alteration.

Immediately apparent in the representation of debitage types from the selected sites is the predominance of flake fragments, as they comprise the majority of the debitage types in nine of the ten assemblages. The exception is at 9BY56, where complete flakes were more numerous. However, only 33 pieces of debitage were collected from this site, a relatively small number which may be skewing the results. Generally, complete flakes and shatter occur in nearly equal proportions within the assemblages.

When assemblages indicative of core reduction are compared to those more representative of bifacial reduction, one sees that bifacial reduction assemblages generally have a slightly smaller proportion of shatter than core reduction assemblages, with the exception of 9BY56. Furthermore, there is a general trend for the bifacial reduction assemblages to have a greater proportion of shatter than do the core reduction assemblages, again with the exception of 9BY56. However, there is not a correlated inverse relationship with complete flakes, as one might expect; rather, there appears to be no pattern in the proportion of complete flakes when examined by reduction mode (Figure 51).

The majority of debitage within each assemblage contain no cortex, representing interior debris; non-cortical debitage accounts for at least two-thirds of each assemblage. The assemblage from 9BY65 contains the greatest proportion of cortical debitage, with approximately 31% of the specimens containing some amount of cortex; additionally, the assemblage contains the highest proportion of debitage with over 50% cortical coverage. Given that the assemblage represents the early stage reduction of chert at this quarry loca-

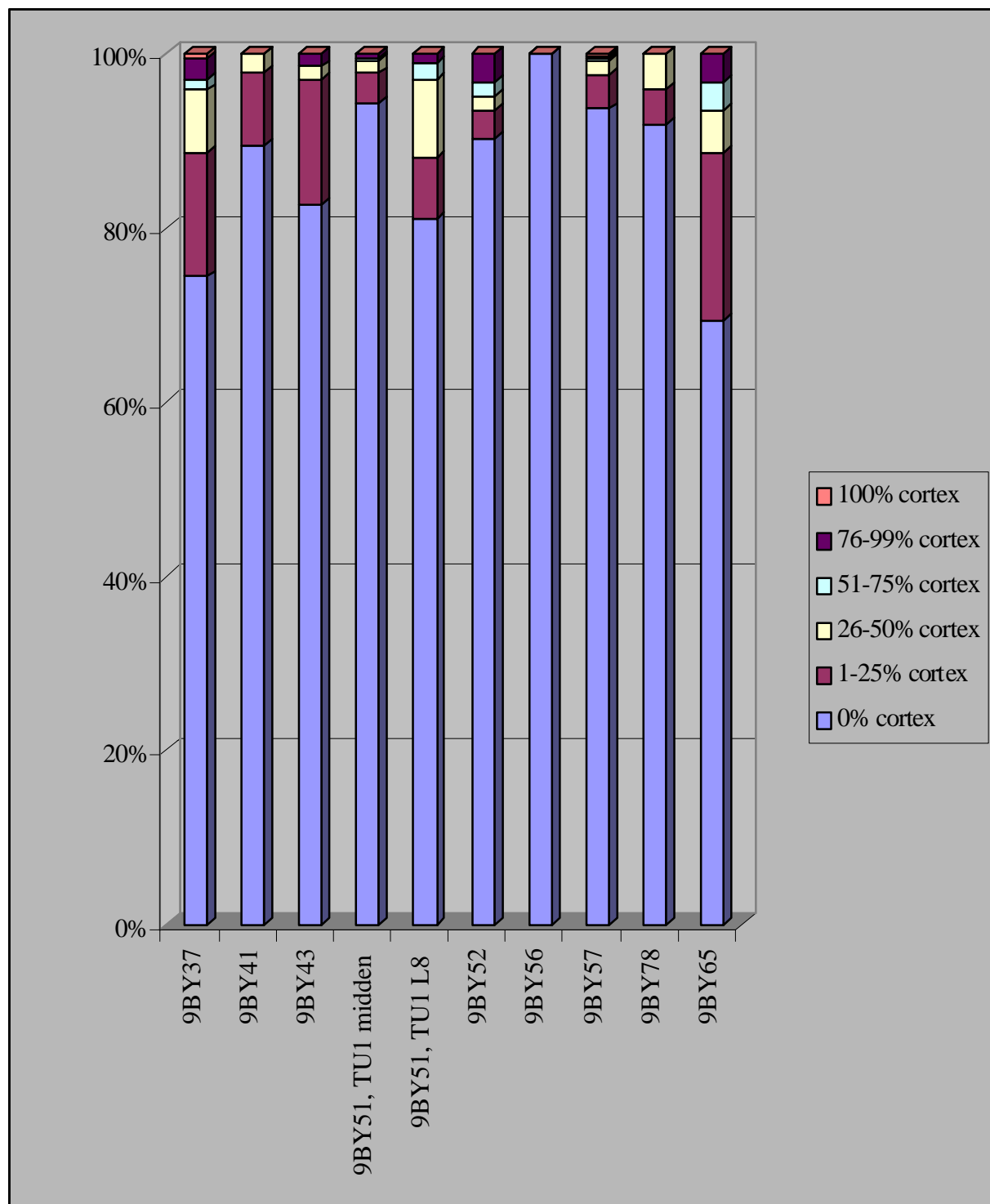


Figure 51. Proportions of Debitage by Cortex.

tion, these high proportions are expected. Cortical debitage is present in all assemblages except one (9BY56), and the majority of cortical debitage falls within the 1-25% coverage category. In the Late Archaic core reduction assemblage from Level 8 of Test Unit 1, the majority of the cortical debitage contains between 26 and 50 percent cortex. As expected, very few pieces of debitage containing complete (i.e., 100%) cortical coverage were present in the selected assemblages (or within any site's assemblage).

When examined by reduction mode, one sees that the core reduction assemblages generally contain higher proportions of cortical debitage than bifacial reduction assemblages. Interestingly, one of the bifacial reduction assemblages, 9BY56, contains no cortical debitage; however, the sample from the site only consists of 33 specimens, which may be skewing the results. Conversely, another bifacial reduction assemblage, that from 9BY52, contains a relatively high proportion of cortical debitage; this assemblage too contains a relatively small sample number (n=62) which may be affecting the results. Regardless, this pattern can be attributed to the different strategies of core reduction and biface production. Cores are typically produced from cortical nodules procured at chert sources, often with minimal modification to the parent nodule, and are therefore likely to retain a relatively large amount of cortex. Bifaces are generally made from cortex-free interior spalls, the cortex having been removed early in the reduction process, likely at another location; therefore, bifacial reduction and maintenance debris is typically free of cortex.

## SUMMARY

Overall, the chipped stone assemblage from the Stuckey Tract reveals extensive exploitation of the chert sources within the tract; non-local lithic materials account for only a very small minority of the flaked stone assemblage. Debitage representing the entire lithic reduction continuum, from both core and bifacial reduction modes, are present. Primary/early stage reduction activities occurred at the chert sources, where large cortical debitage generally occurs. Cores appear to have been roughed out at the quarry sites, and large flakes for biface production were also likely obtained from chert source locations. Expedient tool production from cores was a very important component of the lithic strategies. Most of the expedient tools fall within the 0.5" size grade; knappers appear to have been intentionally producing flakes of this size, possibly because of functional considerations. Evidence also suggests that there is a size threshold between 1.5" and 1.0" for cores, below which cores become generally ineffective for yielding 0.5" flakes. Cores occurred in random, bifacial, and unifacial forms, and many of the cores also served as heavy-duty chopping and cutting tools. There is also evidence that at least one group – Late Archaic – transported large chert nodules a short distance from a chert source to a non-source location where they were then used to generate spalls for biface production and possibly core blanks. These large cores then appear to have been cached during site abandonment. Hunting camps and short-term locations tend to have relatively small frequencies of flaked stone, primarily representing medium to small sized debitage which probably represents both bifacial tool maintenance and the manufacture of expedient tools from cores. Residential sites tend to contain high frequencies of debitage, predominately of small sized debitage which has been heated; such debitage represents bifacial reduction and maintenance activities.





# Chapter 5. Ceramic Assemblages

A relatively robust prehistoric ceramic sample was recovered from the Stuckey Tract, consisting of 917 sherds (Table 14). Ceramics were recovered from 24 of the 43 prehistoric sites; 23.4% of the sherds were contained within Test Unit 1 at 9BY51 (Table 15). Of the sherds from the project area, 45.1% are not identifiable, classified as unidentified stamped, unidentified decorated, or unidentified residual sherds. Of the 503 identifiable sherds, over two-thirds are sand or sand/grit tempered simple stamped. Plain wares, including all temper types, account for 23.9% of the remaining identifiable ceramic assemblage. A relatively small number (n=22) of complicated stamped sherds were identified, although it is likely that a sizable proportion of the unidentified stamped and decorated wares may actually be complicated stamped. Following complicated stamped, a small number of check stamped wares (n=8) were recovered, all of which are linear check stamped. Only one cordmarked sherd was identified, although one of the sherds classified as simple stamped (from 9BY71) was initially thought to be cordmarked. Several fiber tempered plain, punctated, incised, and punctated/incised sherds (n=68) were recovered; eight of these are mixed fiber/sand/grit temper. One sand/grit tempered incised sherd was identified, although this incision may not have been made intentionally. A single burnished sherd was also recovered.

Formal ceramic types identified or tentatively identified in the assemblage include Stallings Island Plain, Punctate, Incised, Punctate/Incised, and Simple Stamped; Satilla Plain; Deptford Linear Check Stamped and Simple Stamped; Swift Creek Complicated Stamped and Plain with notched rim; Ocmulgee Cordmarked; Vining Simple Stamped; Woodstock Complicated Stamped; Napier Complicated Stamped; Etowah Complicated Stamped; Savannah Complicated Stamped and Burnished.

Straight, folded, and notched rims were identified (Table 16). The plain rim sherds are almost evenly divided between straight and folded examples, while a single plain notched rim is present as well. A relatively large number of simple stamped rim sherds were recovered, most of which are straight and a

small proportion of which are folded. One of the folded simple stamped rims exhibits stamping on top of the slightly-flattened lip.

## FIBER TEMPERED WARES

Of the 68 fiber and fiber/sand/grit tempered sherds recovered from the Stuckey Tract, approximately 56% are in an unidentifiable condition (Table 17; Figure 52). (The points on the following maps show artifacts collected from locations marked by the GPS; several surface-collected sherds are not shown as their precise locations at sites are not known. Also, more than one sherd may be present within any given point). The majority of the assemblage is pure fiber tempered, with surface treatments including plain, punctated, punctated and incised (stab and drag), and simple stamped. These sherds exhibit characteristics (e.g., thickness, paste) similar to those which fall under the Stallings Island type description.

A small portion (12%) of the fiber tempered assemblage consists of mixed fiber and sand/grit sherds. All of the identifiable mixed fiber and sand/grit sherds are plain. While the chronological position of mixed fiber and sand/grit tempered pottery in the Southeast is unclear, it is generally thought to be a transitional ware which falls roughly between the Late Archaic pure fiber tempered ceramics and the Early Woodland pure sand/grit tempered wares. Generally, the mixed temper ware is referred to as Satilla, after the type which Snow (1977) identified in the Big Bend area.

The distribution of the fiber tempered assemblage within the Stuckey Tract was relatively limited (Figure 53). Approximately 84% of the fiber tempered and fiber and sand/grit sherds were recovered from Test Unit 1 at 9BY51, with the majority of these from Levels 4 through 7 (Table 18). While more than half of the fiber tempered sherds from this test unit are unidentifiable, the majority of the identifiable sherds are plain. Unfortunately, the fiber tempered ceramic assemblage from the Stuckey Tract is simply not large enough to evidence any chronological difference between the pure fiber tempered and

Table 14. Prehistoric Ceramic Summary.

	Temper					Total (%)
	Sand	Grit	Sand/Grit	Fiber	Fiber/ sand/grit	
Plain	8	3	89	15	5	120 (13.1)
Simple stamped	82		259	1		342 (37.3)
Complicated stamped	8		14			22 (2.4)
Check stamped	6		2			8 (0.9)
Burnished			1			1 (0.1)
Incised			1	2		3 (0.3)
Punctated				5		5 (0.5)
Punctated & Incised				1		1 (0.1)
Cordmarked			1			1 (0.1)
Uid stamped	5		25	1		31 (3.4)
Uid decorated	7	3	108			118 (12.9)
Uid residual/burned	32		195	35	3	265 (28.9)
Total	148	6	695	60	8	917

Table 15. 9BY51 Test Unit 1 Prehistoric Ceramic Summary.

Level	Sand/grit tempered						Sand tempered				Fiber & sand/grit tempered		Fiber tempered			
	Plain	Burnished	Comp.st	Simplest	Checkst	Uid	Plain	Comp.st	Simplest	Checkst	Plain	Uid	Plain	Punctate/ incised	Simplest	Uid
1	4		3	2		22						1				1
2	5					26										
3	7	1	4	2		21		2				1				
4	11		1		1	18			2	4				1		10
5	1				1	13		1		1			2			12
6	1					1				1			6		1	4
7								2			1		6	2		5
8													1	2		
9																
10																
11													1			
Total	29	1	8	4	2	101	0	5	2	6	1	2	16	5	1	32

Table 16. Ceramic Rim Configuration.

	Straight	Folded	Notched	Total
Plain	7	9	1	17
Simple stamped	28	3		31
Complicated stamped		3		3
Uld stamped/ decorated	2	2		4
Fiber tempered	1			1
Fiber/sand/grit	1			1
Total	39	17	1	57

Table 17. Fiber Tempered Ceramic Summary.

	Fiber	Fiber/sand/grit	Total
Plain	15	5	20
Simple stamped	1		1
Incised	2		2
Punctated	5		5
Punctated & Incised	1		1
Uld stamped	1		1
Uld residual/burned	35	3	38
Total	60	8	68



Figure 52. Fiber Tempered Ceramics. A, Square rim, 9BY51 TU1 Lv.8;  
B, Punctate, 9BY51 TU1 Lv.8. Scale is 1:1

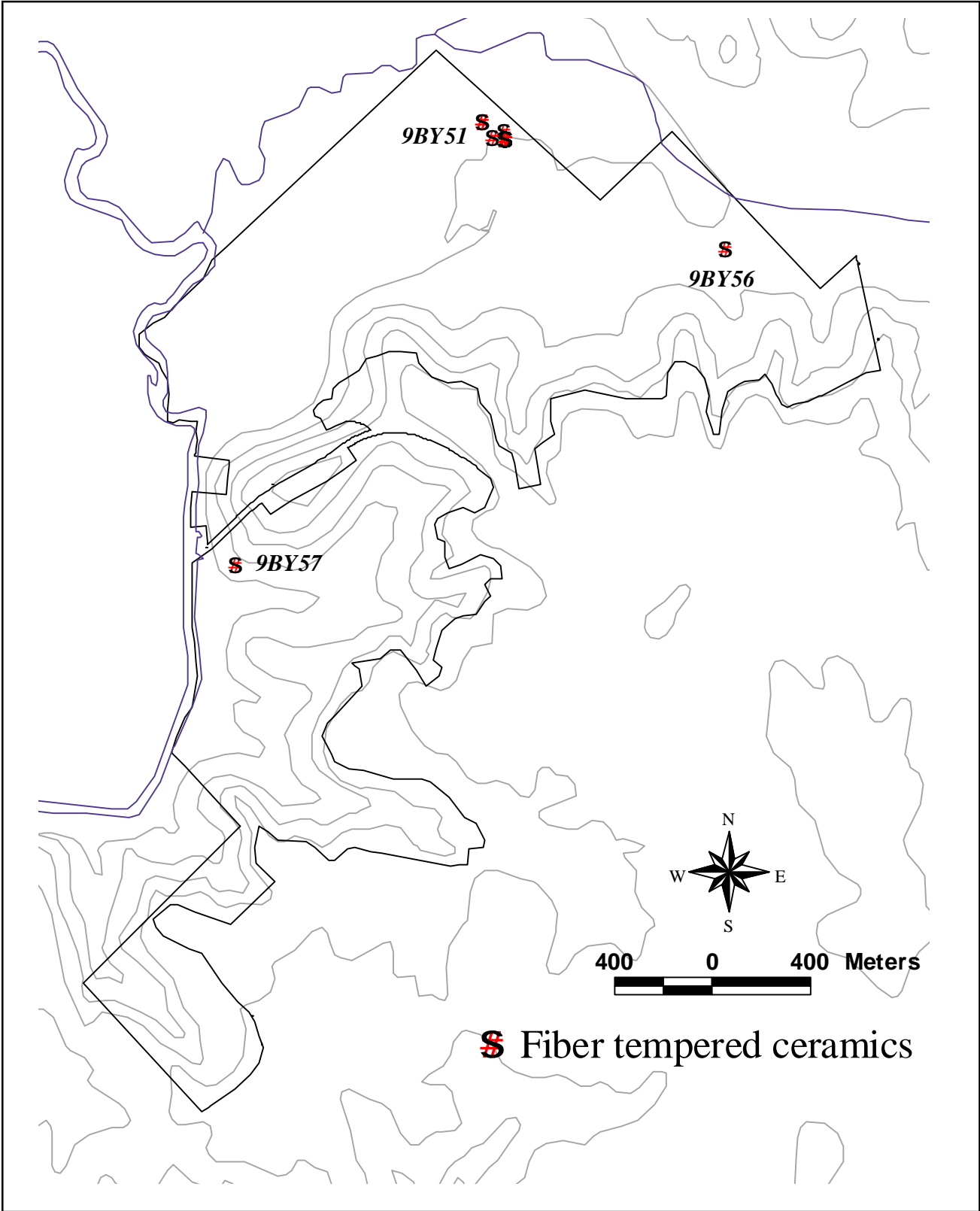


Figure 53. Fiber Tempered Ceramics Distribution.

*Prehistory of the Stuckey Tract, Bleckley County, Georgia*

Table 18. 9BY51 Test Unit 1 Fiber Tempered Ceramic Summary.

Level	Fiber & sand/grit		Fiber				Total
	Plain	Utd.	Plain	Punctated/incised	Simple stamped	Utd.	
1		1				1	2
2							0
3		1					1
4				1		10	11
5			2			12	14
6			6		1	4	11
7	1		6	2		5	14
8			1	2			3
9							0
10							0
11			1				1
Total	1	2	16	5	1	32	57

the mixed temper wares based on decorative or physical characteristics or on stratigraphic positioning. However, the two wares were found in association both in Test Unit 1 (Level 7) and in shovel test D131Z at 9BY56.

### PLAIN SAND/GRIT TEMPERED WARES

One hundred sand, grit, and sand/grit tempered plain sherds were recovered from the Stuckey Tract, distributed widely throughout the project area (Figure 54). Of these sherds, 87 are sand/grit tempered, 10 are sand tempered, and 3 are grit tempered. While it is difficult to determine the cultural affiliation of these sherds due to the limitations of survey (i.e., non-excavation) data, their distribution indicates a close association with the Vining Simple Stamped sherds. Indeed, plain sherds were found on nine of the ten sites which yielded simple stamped sherds, and the two wares were frequently found together in the shovel tests at these sites. For instance, at 9BY78, several plain sherds were recovered from a possible midden in association with a single simple stamped sherd. One of the plain sherds from this shovel test exhibits a notched rim with a rounded scalloped configuration (Figure 55), which is indicative of early Swift Creek pottery.

Clusters of plain sherds are observable at 9BY51, 9BY65, 9BY43, and 9BY57; with the exception of 9BY43, these sites contain a Vining phase component. At 9BY43, the plain sherds cluster in the eastern end of the site. An unidentified stamped sherd which may have a nested diamond pattern was found in this area as well, yet the cultural affiliation of all of the

sherds from this cluster remains unknown. Within the same site, yet several hundred meters away from the cluster, a single plain sherd was found on the surface near a large triangular Yadkin PPK, suggesting that it may date to the Early-Middle Woodland era.

One of the plain sherds, recovered from Test Unit 1 at 9BY51, is characterized by a wedge-shaped squared and folded rim (see Figure 55a). This sherd is identified as Weeden Island Plain.

### COMPLICATED STAMPED WARES

Twenty-two complicated stamped ceramics were recovered, distributed at a low-density at five sites within the Stuckey Tract (Figure 56). Eight of the 22 sherds are sand tempered, while the remaining 14 are sand/grit tempered. The sherds were tentatively identified according to type when possible, but generally the small sample and lack of excavation data prohibits definitive determination of the cultural affiliation of these artifacts. Keith Stephenson examined many of these and provided his opinion on their cultural affiliation as well.

Several of the complicated stamped sherds have decorations indicative of Swift Creek pottery. Two small complicated stamped sherds (Figure 57) were recovered from adjacent shovel tests at 9BY57, one of which also contained a Vining Simple Stamped sherd. The designs on these sand tempered sherds are strongly suggestive of a Swift Creek origin, although their diminutive size prevents a definitive determination.

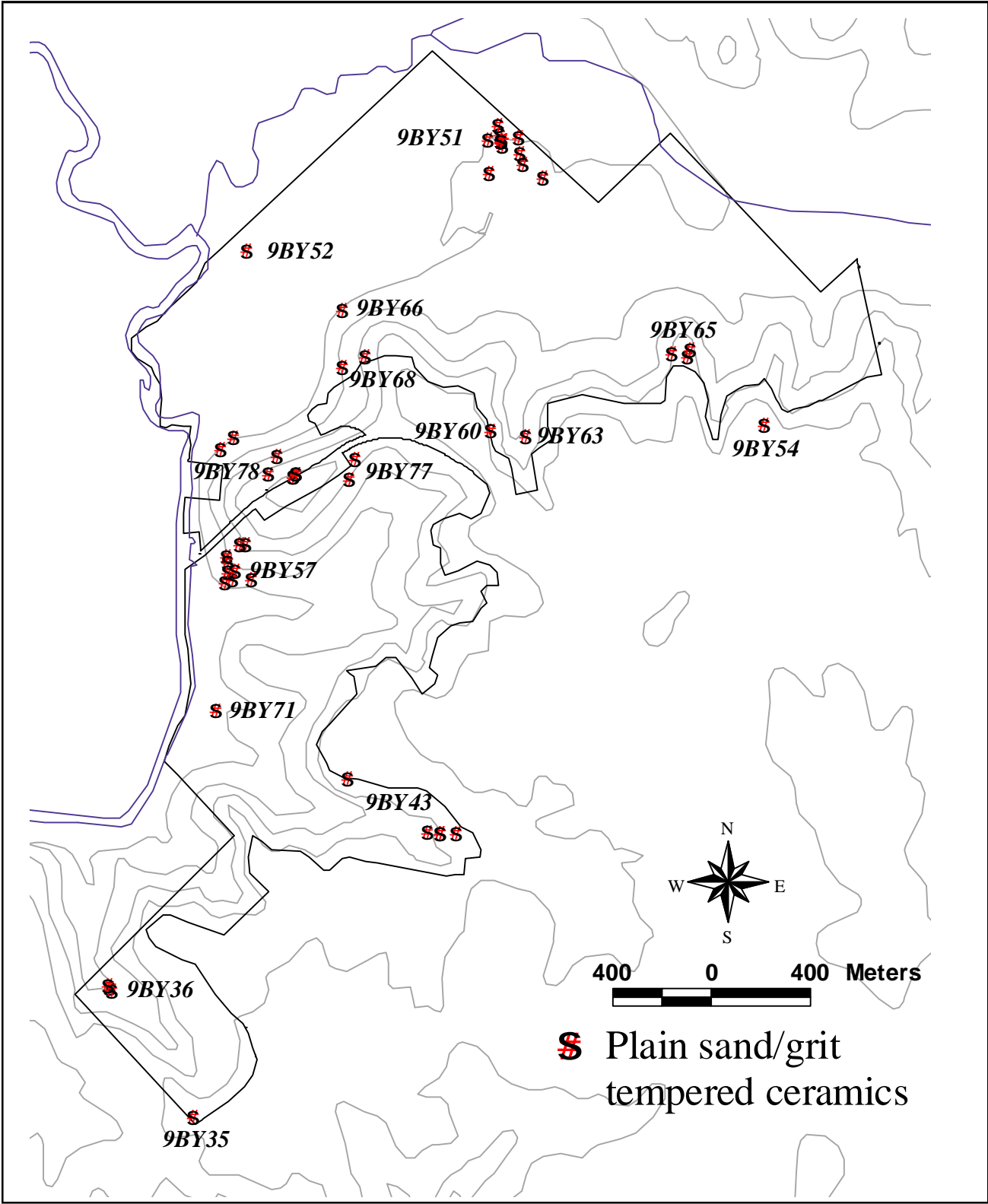


Figure 54. Plain Sand/Grit Tempered Ceramics Distribution.



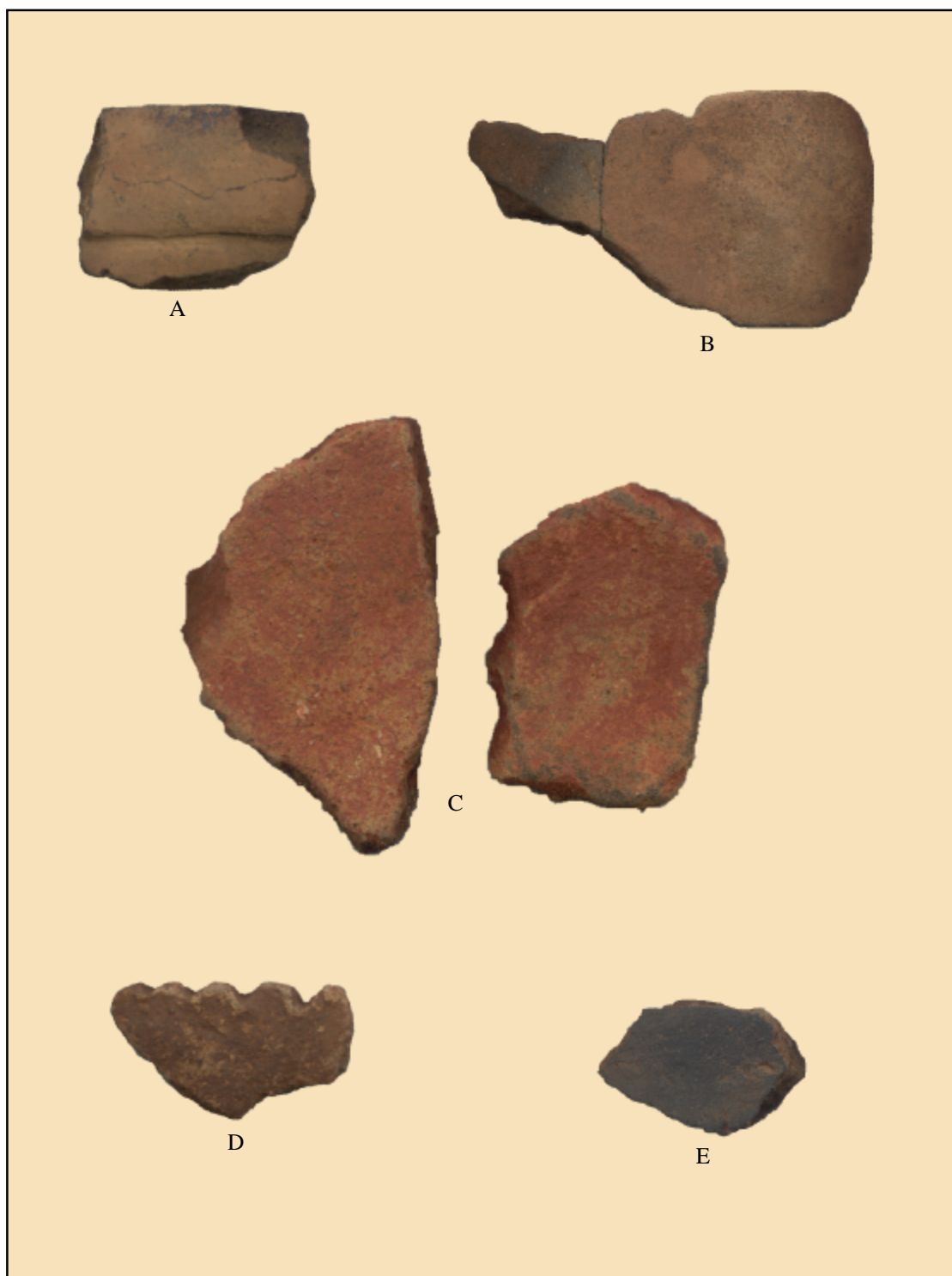


Figure 55. Plain Sand/Grit Tempered Ceramics. A, Folded rim, 9BY51 TU1 Lv.4; B, 9BY57 ST D212Z; C, 9BY65 surface; D, Notched rim, 9BY78 ST G176Z; E, Black filmed, 9BY78 ST D287Z.  
Scale is 1:1

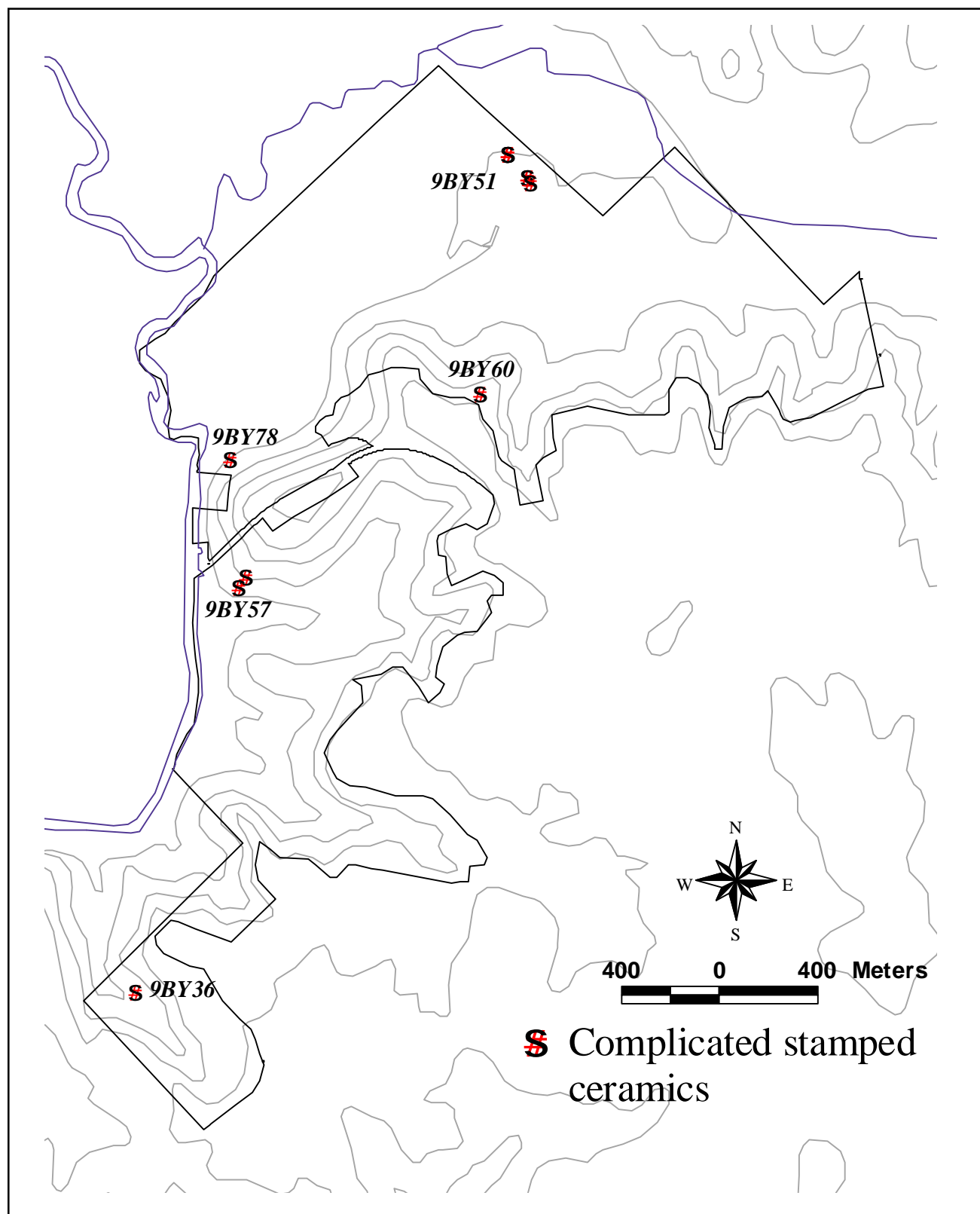


Figure 56. Complicated Stamped Ceramics Distribution.

*Prehistory of the Stuckey Tract, Bleckley County, Georgia*

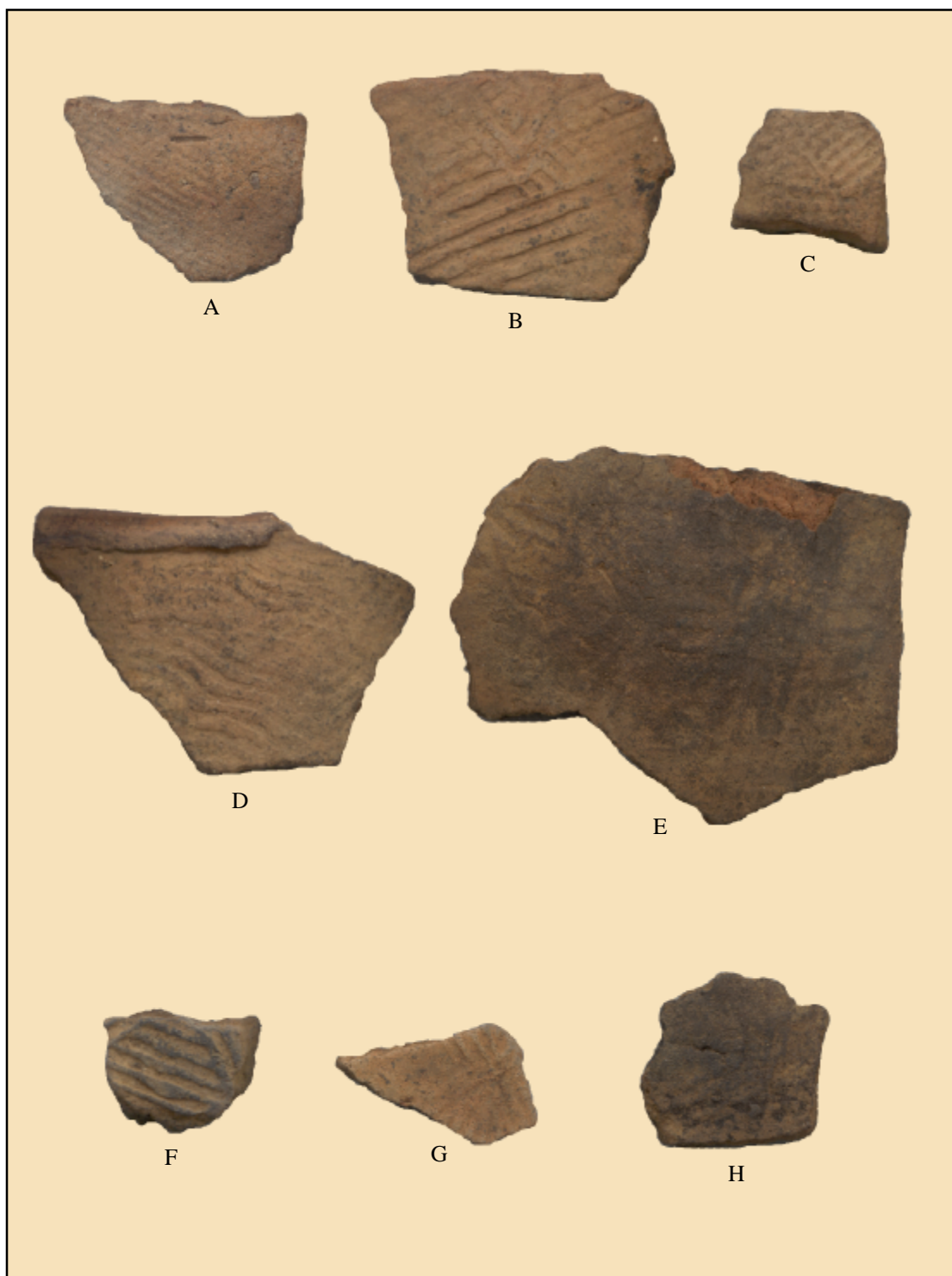


Figure 57. *Complicated Stamped Ceramics.* A, Possible Napier, 9BY37 ST F613Z; B-C, Etowah, 9BY51 TU1 Lv.3; D, Etowah or Savannah, rim, 9BY51 TU1 Lv.3; E, Possible Swift Creek, 9BY51 TU1 Lv.3; F, Swift Creek or Woodstock, 9BY51 TU1 Lv.4; G, Etowah or Napier, 9BY51 TU1 Lv.4; H, Swift Creek, 9BY51 TU1 Lv.5.  
Scale is 1:1

At 9BY78, two complicated stamped sherds were recovered from a single shovel test (Figure 58 f and g). One of these exhibits rectilinear nested diamonds, and is suggestive of an Etowah or Napier origin; the design of the other sherd is simply not clear enough to indicate its cultural origin. Within the same shovel test, a Vining simple stamped sherd and a plain sherd were present. The association of these sherds indicate a Late Woodland to Early Mississippian affiliation for these artifacts.

A single complicated stamped sherd is again associated with Vining Simple Stamped pottery at another site, 9BY60, where an example of each was recovered from a single shovel test. Unfortunately, the complicated stamped sherd is too small to allow identification of the type.

A complicated stamped sherd was found at 9BY37 within a shovel test (see Figure 57 a). This artifact exhibits fine rectilinear stamping indicative of the Napier type, yet the lack of associated diagnostics prevents a definitive cultural affiliation.

Of the complicated stamped sherds from the Stuckey Tract, 59.1% were recovered from Test Unit 1 at 9BY51 (Table 19; see Figure 56). Designs include both curvilinear and rectilinear styles, with types tentatively identified as Swift Creek, Etowah, Napier, Savannah, and possibly Woodstock. One of the complicated stamped sherds from Level 3 (see Figure 57f) exhibits parallel lines within a circular or possibly rounded diamond element. Keith Stephenson and Julie Markin both believe that this sherd is likely of Woodstock origin.

The three complicated stamped sherds from Levels 5-7 at Site 9BY51 appear to represent Swift Creek pottery (see Figure 57 e, f, and h). All of these sherds are sand tempered. Three of the sherds from Level 3 may be Swift Creek as well. A few of the sherds from the test unit exhibit designs which appear to be Mississippian complicated stamped, either Etowah or Savannah (see Figure 55 d).

### **SIMPLE STAMPED WARES**

Simple stamped sherds dominate the ceramic assemblage from the Stuckey Tract, accounting for 37.3% of the total sherds and nearly 67.9% of the identified sherds (Figures 59-62). Simple stamped wares were found throughout the project area; however, the vast majority are from one site, 9BY65, which yielded over 89% of the simple stamped sherds (see Figure 62; Table 20). 9BY65 is remarkable due to several reasons: the sheer number of sherds scattered on the surface, the overwhelming dominance of simple stamped sherds in

the assemblage, and the presence of a chert outcrop which was extensively exploited.

Of the identified ceramics at this site, which include plain, simple stamped, and incised, simple stamped wares account for 97.4% of the sample; of the total ceramic assemblage, which include unidentified sherds, simple stamped wares comprise 73.8% of the collection. Simple stamping occurs on both pure sand tempered and sand/grit tempered wares, and the stamping is quite variable. It is generally fine in nature, with narrow lands and grooves; however, relatively wide lands and grooves are present as well. Additionally, the stamping may be variable on an individual sherd in terms of stamp width and depth. Over-stamping occurs more often than not, with nearly 61% of the total simple stamped assemblage exhibiting over-stamping (Table 21). This ratio changes only slightly when controlled for temper: over-stamping occurs on approximately 67% of the sand tempered sherds, and on nearly 59% of the sand/grit tempered sherds. Several rim sherds were collected, and include straight, tapered, inverted, everted, folded and everted, and a straight rim which was stamped on the top of the lip.

Archaeologists Dean Wood and Dan Elliott of Southern Research, both of whom have considerable experience with prehistoric pottery in Georgia, examined the simple stamped sherds and felt that they are much more similar to Vining Simple Stamped than to Deptford Simple Stamped pottery. The occurrence of the small triangular PPK at the site provides additional evidence that these simple stamped sherds are affiliated with the Late Woodland Vining culture.

In comparison to other sites containing Vining assemblages, approximately 10% of the identifiable ceramics in the Hogcraw Creek assemblage were simple stamped (Worth and Duke 1991), while the percentages of simple stamped ceramics at Vining period sites in Oconee National Forest study sample (Elliott and Wynn 1991) ranged from 22 to 42 percent, with the overall average being 23%. At Raccoon Ridge in the Oconee River Valley in Morgan County, approximately 50% of the sherds recovered from test units excavated in the single-component Vining area of the site exhibited simple stamping (Worth 1996). At the Tarver Site upriver at the Fall Line, approximately 58% of the combined sherds from three Vining features are simple stamped (Pluckhahn 1997). All of these percentages are far below that observed at 9BY65 in the Stuckey Tract.

In terms of thickness, 109 of the Vining simple stamped sherds from the Stuckey Tract were measured (Table 22). Of these, minimum thickness is 4.9 mm and maximum thickness is 10.9

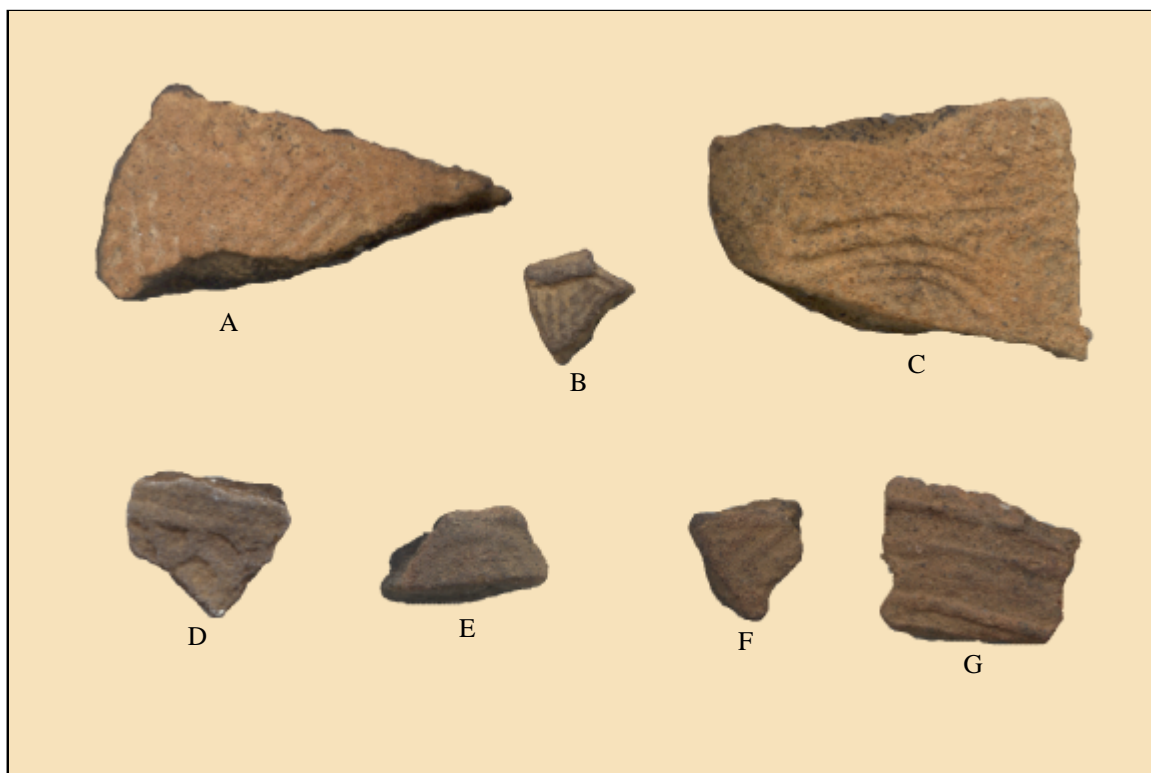


Figure 58. *Complicated Stamped Ceramics.* A, Possible Napier, nested diamond motif, 9BY51 ST D126Z; B, Possible Napier, nested diamond motif, folded rim, 9BY51 ST D126Z; C, Etowah or Savannah, 9BY51 ST F139Z; D, Swift Creek, 9BY57 ST D214Z; E, Curvilinear, 9BY57 ST G174Z; F, Nested diamond motif, 9BY78 ST F511Z; G, 9BY78 ST F511Z. Scale is 1:1

Table 19. *9BY51 Test Unit 1 Complicated Stamped Ceramics.*

Level	Count	Comments
1	3	Rectilinear, possible nested diamonds
2	0	
3	6	
4	1	Etowah or Napier
5	1	Swift Creek
6	0	
7	2	Concentric circles – possible Swift Creek
Total	13	

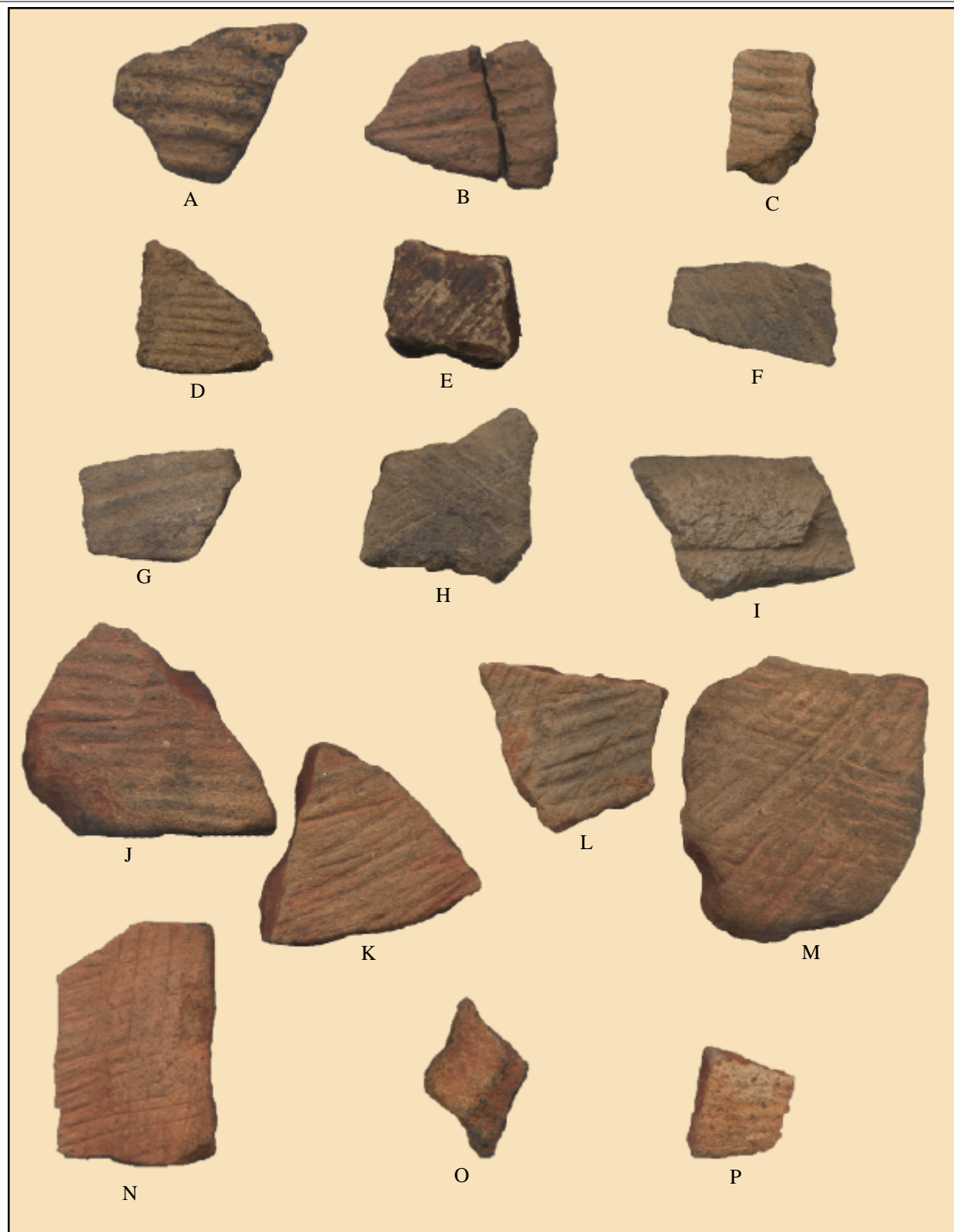


Figure 59. Simple Stamped Ceramics. A, Deptford, 9BY51 TU1 Lv.4; B, Vining, 9BY35 surface; C, Vining, 9BY51 TU1 Lv.3; D, Vining, TU1 Lv.4; E, Vining, 9BY57 ST C210Z; F, Vining, 9BY57 ST B313Z; G, Vining, 9BY57 surface; H, Vining, 9BY57 ST G174Z; I, Vining, folded rim, 9BY57 ST B313Z; J-P, Vining, 9BY65 surface.

Scale is 1:1





Figure 60. Simple Stamped Ceramics. A-E, Vining, rims, 9BY65 surface; F, Vining, 9BY65 ST F652Y.  
Scale is 1:1

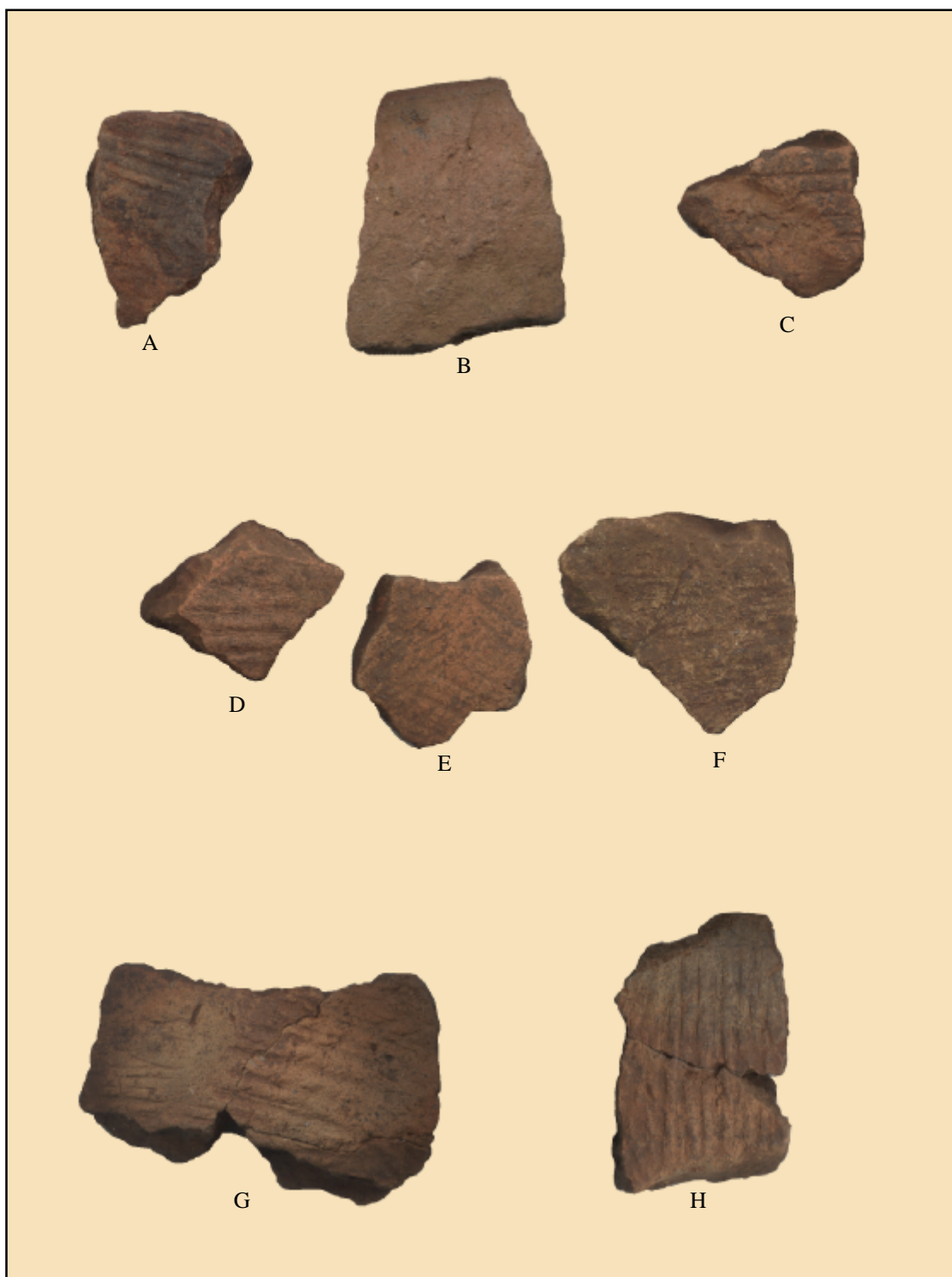


Figure 61. Simple Stamped Ceramics. A, Vining, 9BY76 ST G176Z;  
B, Vining, rim, 9BY78 ST F511Z; C-H, Vining, 9BY78 surface.  
Scale is 1:1

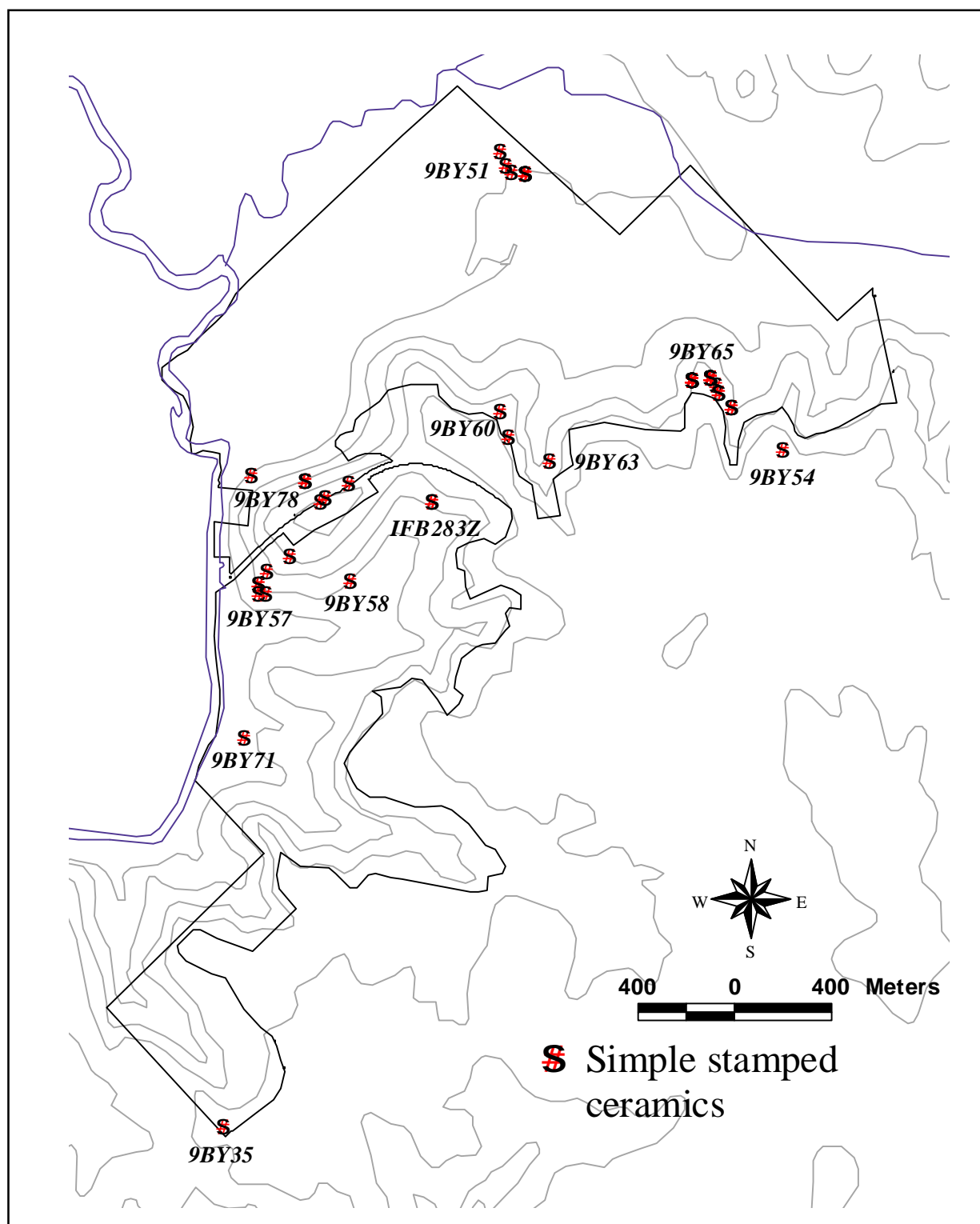


Figure 62. Simple Stamped Ceramics Distribution.

Table 20. 9BY65 Prehistoric Ceramic Summary.

Description	Sand	Sand/Grit	Total
Plain	0	7	7
Simple stamped	79	225	304
Uld stamped	0	2	2
Incised	0	1	1
Uld decorated	0	67	67
Uld, residual	1	30	31
Total	80	332	412

Table 21. 9BY65 Simple Stamping Decorative Summary.

	Sand	Sand/grit	Total
Parallel stamped	26 (32.9)	93 (41.3)	119 (39.1)
Over-stamped	53 (67.1)	132 (58.7)	185 (60.9)
Total	79	225	304

Table 22. Thickness of Selected Vining Simple Stamped Sherds.

Site	Sherds Measured	Min. Thickness (mm)	Max. Thickness (mm)	Average Thickness (mm)
9BY51	2	6.4	7.8	7.1
9BY54	1	-	-	8
9BY57	2	4.9	5.8	5.4
9BY60	1	-	-	8.3
9BY63	1	-	-	5.3
9BY65	100	5.5	10.9	7.9
9BY78	2	7.8	8.8	8.3
Total	109	4.9	10.9	7.8

mm, while the average thickness is 7.8 mm. Ranging between 5.2 mm and 12.2 mm in thickness, the Oconee National Forest Vining sherds are generally between 7.5 and 7.8 mm thick (Elliott and Wynn 1991), mirroring the Stuckey Tract assemblage. (The thickness of the Hogcraw Creek and the Raccoon Ridge sherds were not given.)

The widths of the lands and grooves on 17 simple stamped sherds from 9BY65 were measured. Both lands and grooves are relatively narrow. The lands range in width from 0.49 to 3.5 mm, with the average being 1.7 mm, while the grooves range in width from 0.4 to 2.9 mm, with the average being 1.1 mm.

A significant difference in the proportions of associated incised sherds is observed between the Stuckey Tract assemblage and the Hogcraw Creek and the Oconee National Forest site assemblages. Elliott and Wynn (1991) found that incising beneath the rim occurred on approximately 9% of their simple stamped sherds, Worth (1996) observed it occasionally in the Raccoon Ridge assemblage, and Worth and Duke (1991) found such decoration to be rare on simple stamped sherds. This characteristic was not found on any of the simple stamped sherds from the Stuckey Tract, and only one incised sherd was found from the project area, albeit from 9BY65.

Only one of the simple stamped sherds from the Stuckey Tract did not fit the Vining type description, instead resembling the Deptford Simple Stamped type (see Figure 59a). The lands and grooves of the simple stamp on this sherd are much wider and more regular than the stamps found on the Vining sherds; further, the stamping is slightly curvilinear. The context of the sherd supports this affiliation as well, as it was recovered from the same level in Test Unit 1 in which several Deptford Check Stamped wares were present.

### CORDMARKED WARES

A single definitive sand/grit tempered cordmarked sherd (Figure 63a) was recovered from site 9BY45. This sherd exhibits two parallel cord impressions measuring approximately 2-3 mm in width and approximately 6 mm apart. The sherd fits the Ocmulgee Cord Marked type description. Given the abundance of cordmarked wares from the Big Bend area (Snow 1977a, 1977b) and those reported from even nearer the Stuckey Tract from the area between Warner Robins and Hawkinsville (Steinen 1995, n.d.), it is interesting that this is the only definitive cord marked ceramic from the project area.

One of the sherds from the project area (9BY71) exhibits decoration similar to cord marking, yet it does not fit the Ocmulgee Cord Marked type (see Figure 63b). This sherd was submit-

ted to archaeologist Keith Stephenson, who has worked extensively with cord marked ceramics from the Big Bend area. Mr. Stephenson felt it is not cord marked, but rather may represent Vining Simple Stamped. Interestingly, Wauchope (1966:52) describes a Mossy Oak Cord Marked type, which is characterized by parallel lines of twisted-cord impressions resembling Mossy Oak (Vining) Simple Stamped. One of the cord marked sherds in Wauchope's (1966) study exhibited simple stamping on the interior. At the Tarver Site located upriver at the Fall Line, Pluckhahn (1997) provisionally identified a Vining Cord Marked vessel, characterized by faint, narrow vertical and generally parallel grooves with twisted-cord impressions. Pluckhahn (1997) states that the cord marking on this vessel is unlike Ocmulgee Cord Marked decoration. The sherd from the project area is tentatively categorized as Vining Simple Stamped, although the decoration is somewhat dissimilar from the other simple stamped sherds from the Stuckey Tract. The decoration is similar to the simple stamping found on other sherds in the project area in that it is continuous without wide lands between the grooves (as found on the definitive cordmarked sherd from the project area), yet dissimilar in that the grooves are not well-defined. Furthermore, the decoration only hints at cord impressions. The sherd measures 5.6 mm in thickness. It was the only ceramic in the shovel test, while two (mendable) plain sherds were recovered from an adjacent shovel test. The site lies on a ridge adjacent to (and south of) the ridge on which the true cord marked sherd was recovered, and two ridges south of the ridge on which most of the Vining sites lay, suggesting possible affiliations with either or both of these occupations.

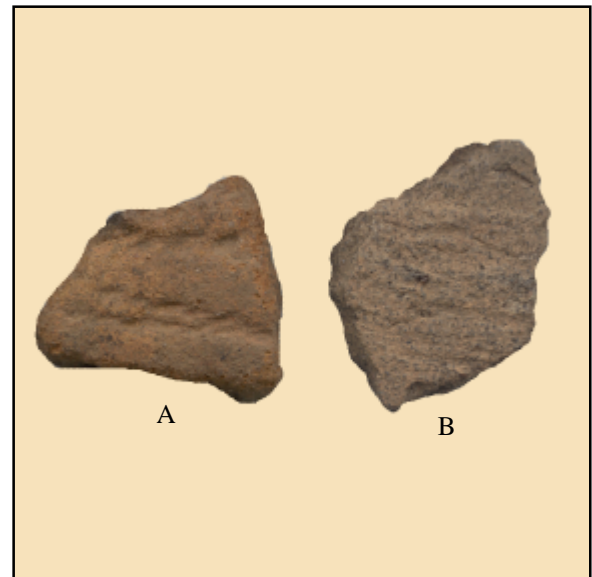


Figure 63. Cordmarked Ceramics. A, 9BY45 ST F93Z; B, Tentative simple stamped, 9BY71 ST D42Z. Scale is 1:1

### CHECK STAMPED WARES

Eight check stamped sherds were recovered from the Levels 4-6 (midden zone) of Test Unit 1 at 9BY51 (Figures 64 and 65). All of these sherds exhibit linear check stamping. The morphological and decorative attributes of these sherds indicate that they represent the Deptford Check Stamped type. As discussed above, a single Deptford Simple Stamped sherd was found in association with these check stamped sherds.



Figure 64. Check Stamped Ceramics. A-D, Deptford, 9BY51 TU1 Lv.4;  
E, Deptford, 9BY51 TU1 Lv.5; F, Deptford, 9BY51 TU1 Lv.6.



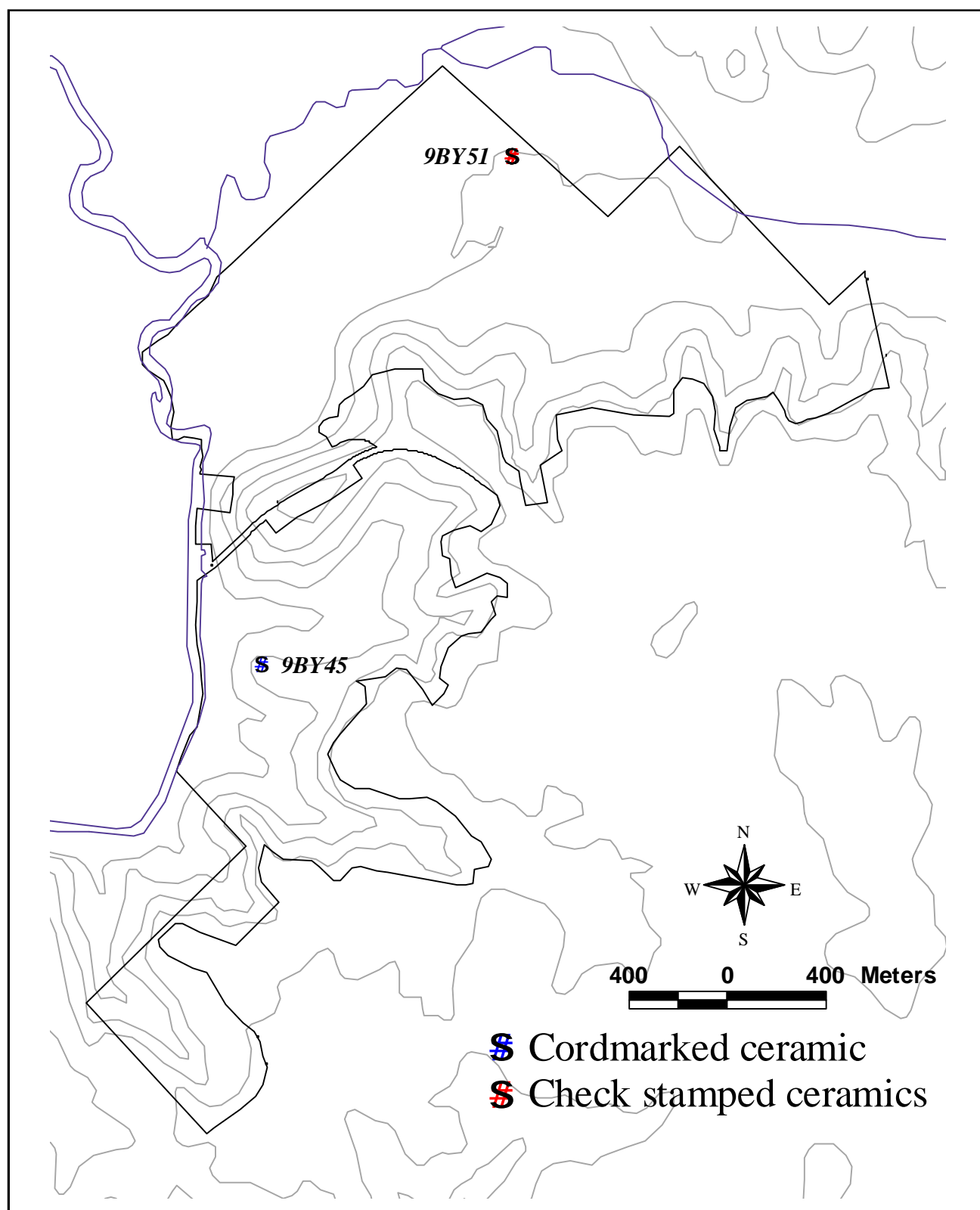


Figure 65. Cordmarked and Check Stamped Ceramics Density.



# Chapter 6. Discussion & Conclusions

## SETTLEMENT PATTERNS

Looking at the overall picture of prehistoric settlement and occupation within the Stuckey Tract, sites occur on all land-form types. While artifacts were not found actually within bottomland spots which hold water seasonally, they occur on the slightly-elevated, better-drained areas immediately surrounded by these wet areas. Examples of such sites include 9BY52 and 9BY53. Additionally, while we did not map the boundaries of the upland wetland/seep areas and thus cannot precisely locate these on the map for analysis purposes, many sites were associated with these microenvironmental patches. Although the exact influence of these spots on prehistoric settlement patterning is unknown, it is extremely likely that they were attractive to the inhabitants for their biodiversity and additional resources. This issue would be an interesting one for future cultural ecology investigations, although it would be helpful to wait a decade or two for the dense scrubby vegetation to mature, in terms of identifiability, accessibility and mapping efficacy of these locations.

Another interesting settlement finding of the study is the presence of sites on slopes which are generally thought by archaeologists as too steep for occupation. In the fishing lake study area to the south, SAS (Gresham 1999; Benson et al. 2001) found a similar situation. Site 9PU57 yielded artifacts on nearly 10% slopes, prompting the question of whether these peoples were living in houses on such slopes; the testing data indicates that they were. Furthermore, the steepness begs the question of whether such artifacts are *in situ* or have been redeposited from colluvial erosion (Benson et al. 2001). Within the Stuckey Tract, several sites were recorded on slopes, such as 9BY43, 9BY67, and 9BY68. At 9BY43, a chert quarry/procurement site, the author measured the slope between positive shovel tests D30Z and G32Z at 8 degrees using a clinometer. At 9BY67, the slope between positive shovel tests D275Z and G258Z was measured at 10 degrees; chert nodules and boulders are present at this site as well, although they have been pushed into linear pushpiles by heavy machinery. The most extraordinary example of artifacts occurring on a steep slope is at 9BY68, where the au-

thor excavated a shovel test (D290Z) on a slope of 20 degrees; artifacts in this shovel test occurred between 50 and 70 cmbs. Figure 66 illustrates slopes ranging between 10 and 20 degrees; while they do not appear to be very steep graphically, they *feel* steep on the ground.

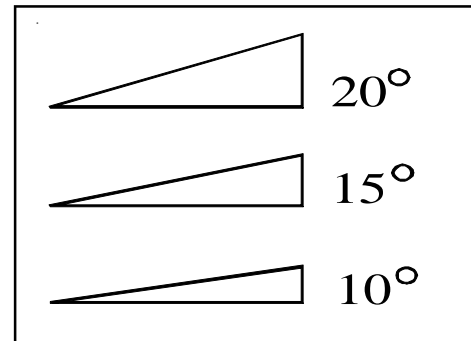


Figure 66. Example of Degree of Slope.

It was initially thought that the primary reason for the occurrence of remains on such slopes was the presence of chert. That is, because the outcrops are generally located on the ridge sideslopes, prehistoric peoples visited the spots in order to acquire lithic material, and thereby left evidence of such use. However, unlike 9BY43 and 9BY67, no chert outcrops were observed at 9BY68, and the artifact assemblage is not indicative of lithic procurement/early-stage lithic reduction activities. Additionally, Benson et al. (2001) indicate that people *resided* at 9PU57, and make no mention of the presence of chert outcrops.

As Benson et al. (2001) point out, it is generally uncommon for such slopes to contain archaeological remains. Slopes of such gradient are often written off by archaeologists as too steep with the reasoning that cultural remains are extremely unlikely to be present. Typically, people are assumed not to have lived on or occupied relatively steep slopes simply due to the steepness, and therefore, such locations are consid-

ered to have a very low probability of site occurrence. Many archaeologists, probably most, would never have extensively shovel tested such steep slopes; indeed, the author is typically one such archaeologist. However, in order to examine this issue, the field crew was instructed to shovel test areas of such gradient, and the results indicate that the occurrence of sites on relatively steep slopes in the Stuckey Tract is not unusual.

### ARTIFACT DENSITIES

The density of various artifact classes was generated using Surfer Version 8. This was accomplished by creating tables of these artifacts which included the georeferenced proveniences and the artifact frequency for each of these proveniences. However, many of the surface finds were not included as they were not marked using the GPS, and thus are not georeferenced (other than on the site maps). In addition, the test unit data was not included in this analysis. Thus, the artifact density maps generally reflect shovel test and limited surface artifact densities.

Figure 67 shows the density of all artifacts. The highest density of artifacts is observable at 9BY51 in the northern portion of the project area. This is the location within and around the midden, where shovel test artifact frequencies range from 53 to 163. Another area of high artifact density is observable at site 9BY57. Three adjacent shovel tests at this site yielded 63, 76, and 113 artifacts. Both of these areas are believed to represent residential locations, which would explain these high artifact densities.

The highest density of ceramics is observable at 9BY65, the Vining phase site with the dense scatter of simple stamped artifacts associated with the chert outcrop (Figure 68). While shovel test densities are not particularly high at this site, the map reflects the inclusion of surface artifact data. Again, both the midden area at site 9BY51 and site 9BY57 reflect a high ceramic density, due to the frequency of late prehistoric ceramics in these locations.

These two areas (9BY51 and 9BY57) also contain the most dense concentrations of lithic debitage (Figure 69). While the densities of heated and unheated CPC are generally similar throughout the project area, higher densities of the heated form of the material is observable at the possible mound location at 9BY51 and at 9BY57 (Figure 70). Interestingly, there is a slightly higher density of HCPC than unheated CPC at 9BY43, a site where chert outcrops along the ridge sideslope (Figure 71). This may reflect the actual late-stage heating of material acquired on-site. A Yadkin PPK was recovered from the sur-

face at one of the areas of the site having a higher HCPC density, suggesting that this Early – Middle Woodland occupation may be responsible for this effect. Spots of higher HCPC density are also observable at a cluster of sites in the north-central portion of the project area; these sites are 9BY60, 9BY61, 9BY62, 9BY63, and 9BY64. Two of these sites (9BY60, 9BY63) are single-component Vining phase sites, while the ages of the components at the three remaining sites (9BY61, 9BY62, and 9BY64) are unknown. The location of the three unknown prehistoric sites among the Vining occupation along this ridge suggests that they too may be associated with the Vining occupation of the project area.

### DIACHRONIC TRENDS

#### *Early Archaic*

Definitive Early Archaic artifacts from the Stuckey Tract include three Kirk Stemmed/Serrated PPKs, each recovered from a separate site, while a patinated chert flake tool assemblage from one site also appears to be Early Archaic in age (Figure 72). The Kirk Stemmed/Serrated PPK is dated to the terminal Early Archaic period in the Southeast. While three PPKs from the Stuckey Tract seems a relatively meager number, actually these remains evidence a substantial use of the project area. Three of the Early Archaic components (including the flake tool assemblage) are situated within the uplands, while the fourth is located on the well-drained bottomland terrace above the vast swamp at the confluence of South Shellstone Creek and the Ocmulgee River. Interestingly, the PPKs are all located in the northern portion of the project area, adjacent to South Shellstone Creek, which is the largest tributary nearest the Stuckey Tract. One of the points was collected at a significant chert source, while another was collected from an adjacent ridge which also contains chert outcrops. The patinated flake tools from the southern end of the Stuckey Tract were also associated with a chert source. These artifacts were located on the ridge crest overlooking the side slope on which an extensive chert outcrop is exposed. Clearly, the acquisition of chert for the production of tools was a very important activity during the Early Archaic period.

Sites containing Kirk Stemmed/Serrated PPKs are scattered along the Ocmulgee and Oconee River valleys (Figure 73). Two clusters of sites are evident in the Coastal Plain, one in the Feronia locality at the bottom of the Big Bend and one to the west between the Flint and Alapaha rivers. The drainage divide between the Gulf of Mexico and the Atlantic Ocean watersheds is located between the Ocmulgee and the Alapaha rivers. As suggested by Blanton and Snow (1989), this geographic setting may have significance in relation to the clus-

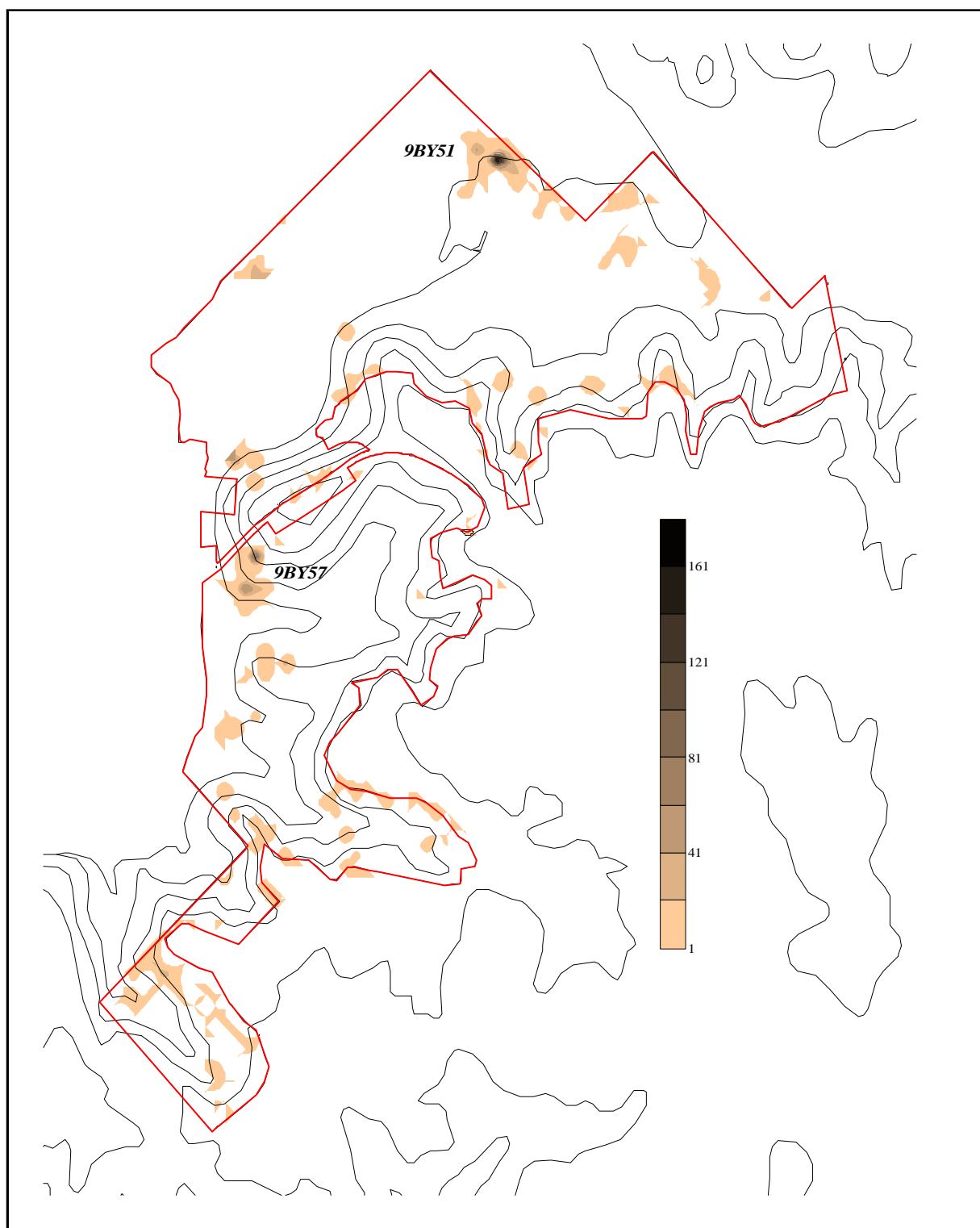


Figure 67. Density of All Artifacts.

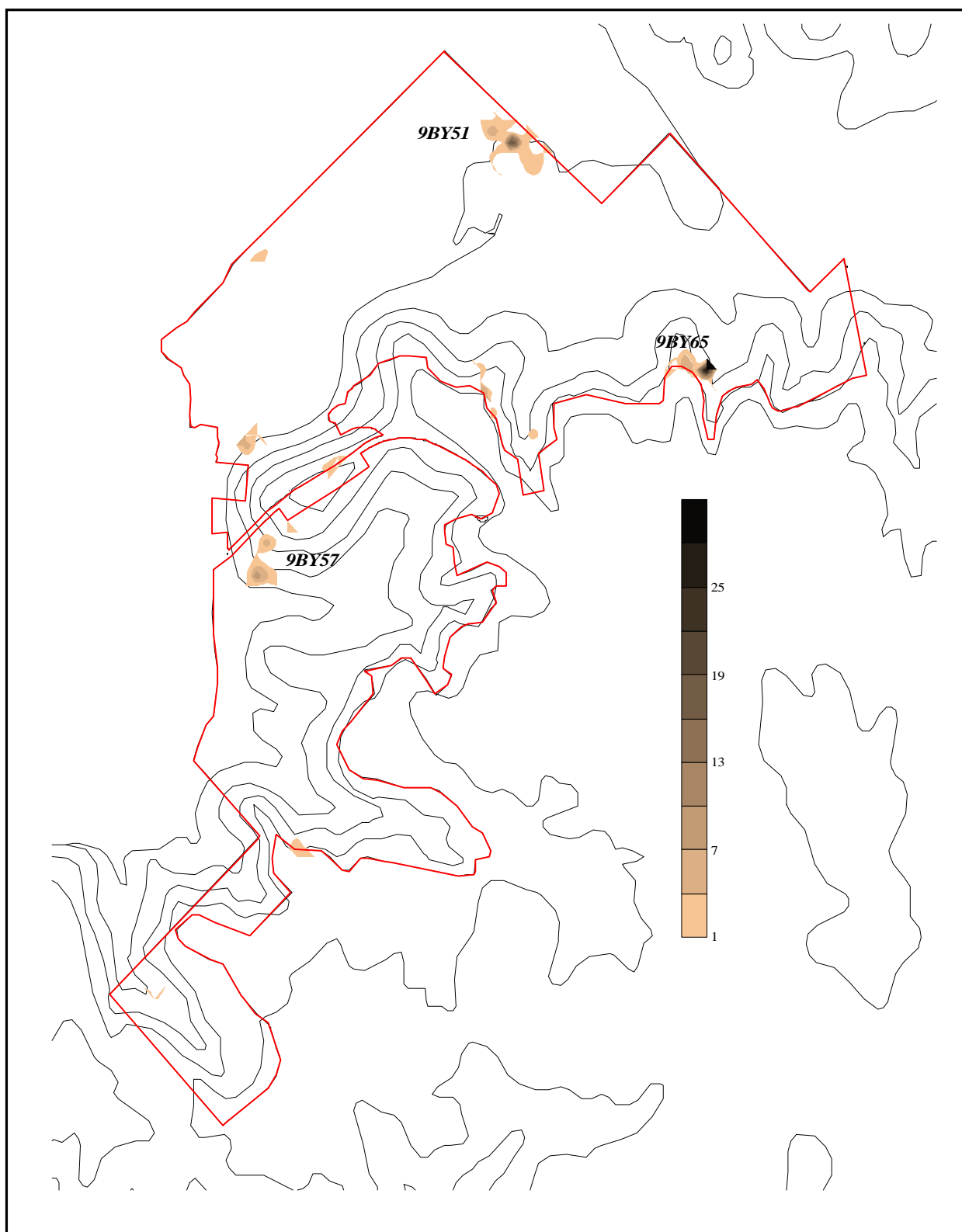


Figure 68. Density of All Ceramics.



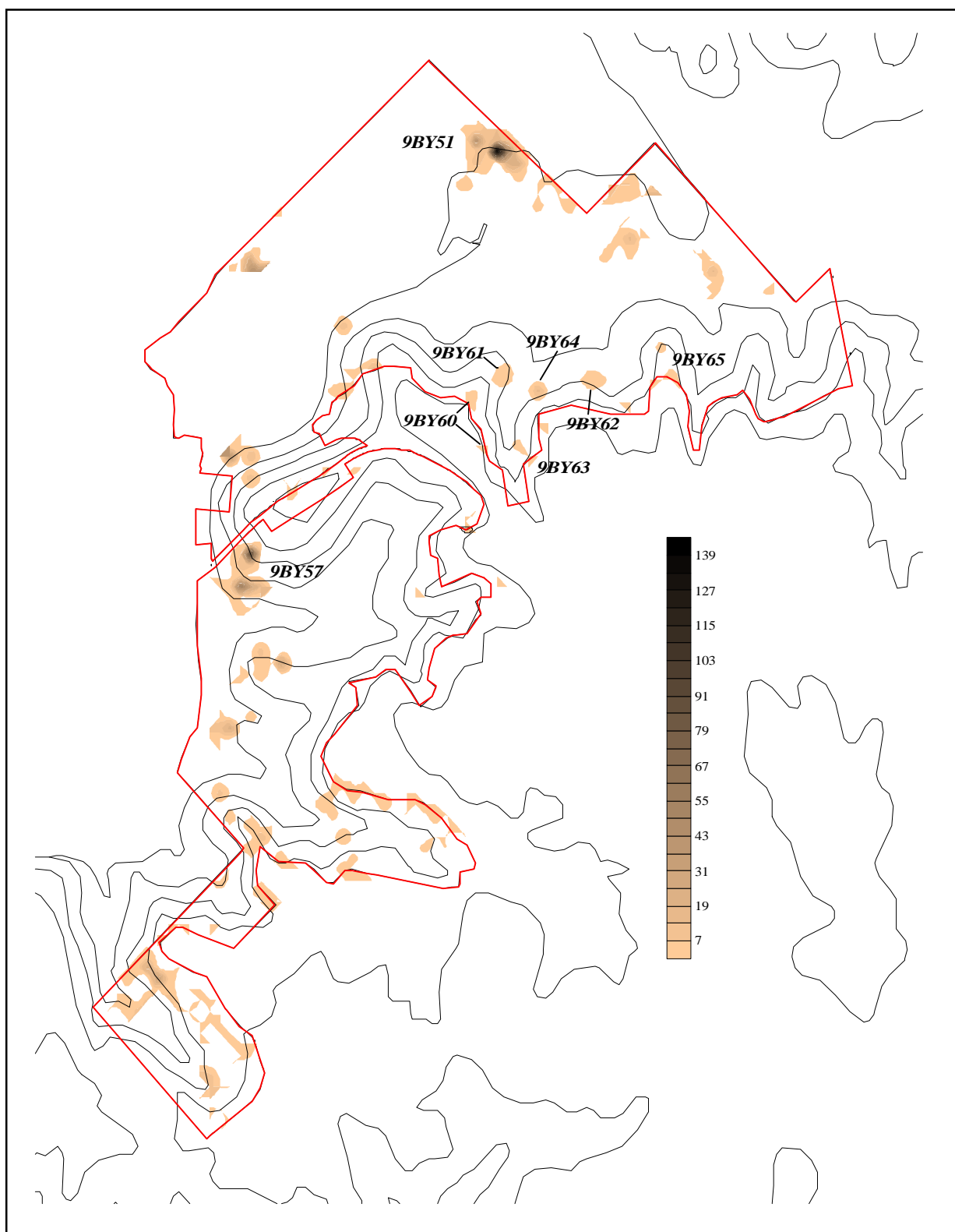


Figure 69. Density of All Debitage.

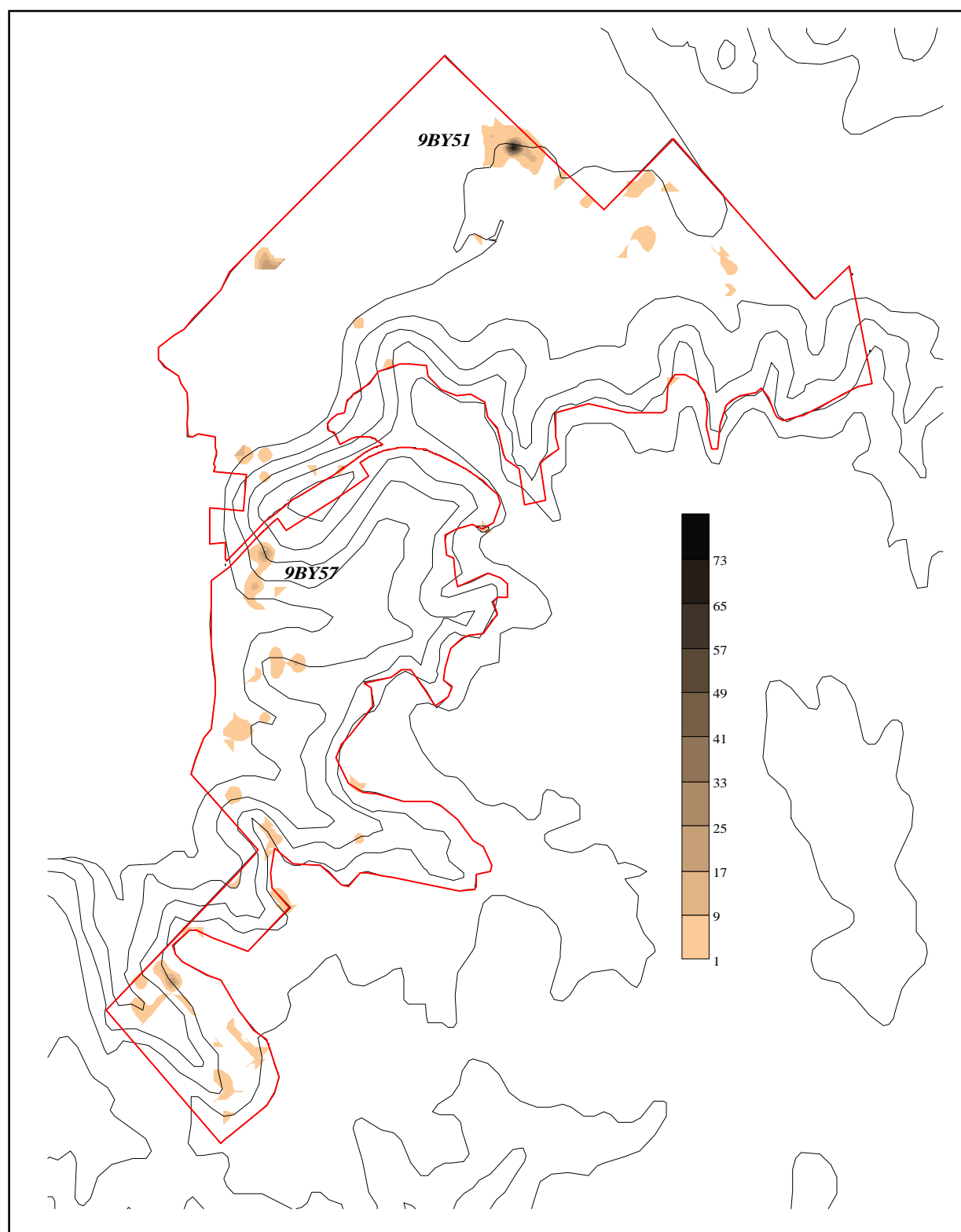


Figure 70. Density of CPC Debitage.

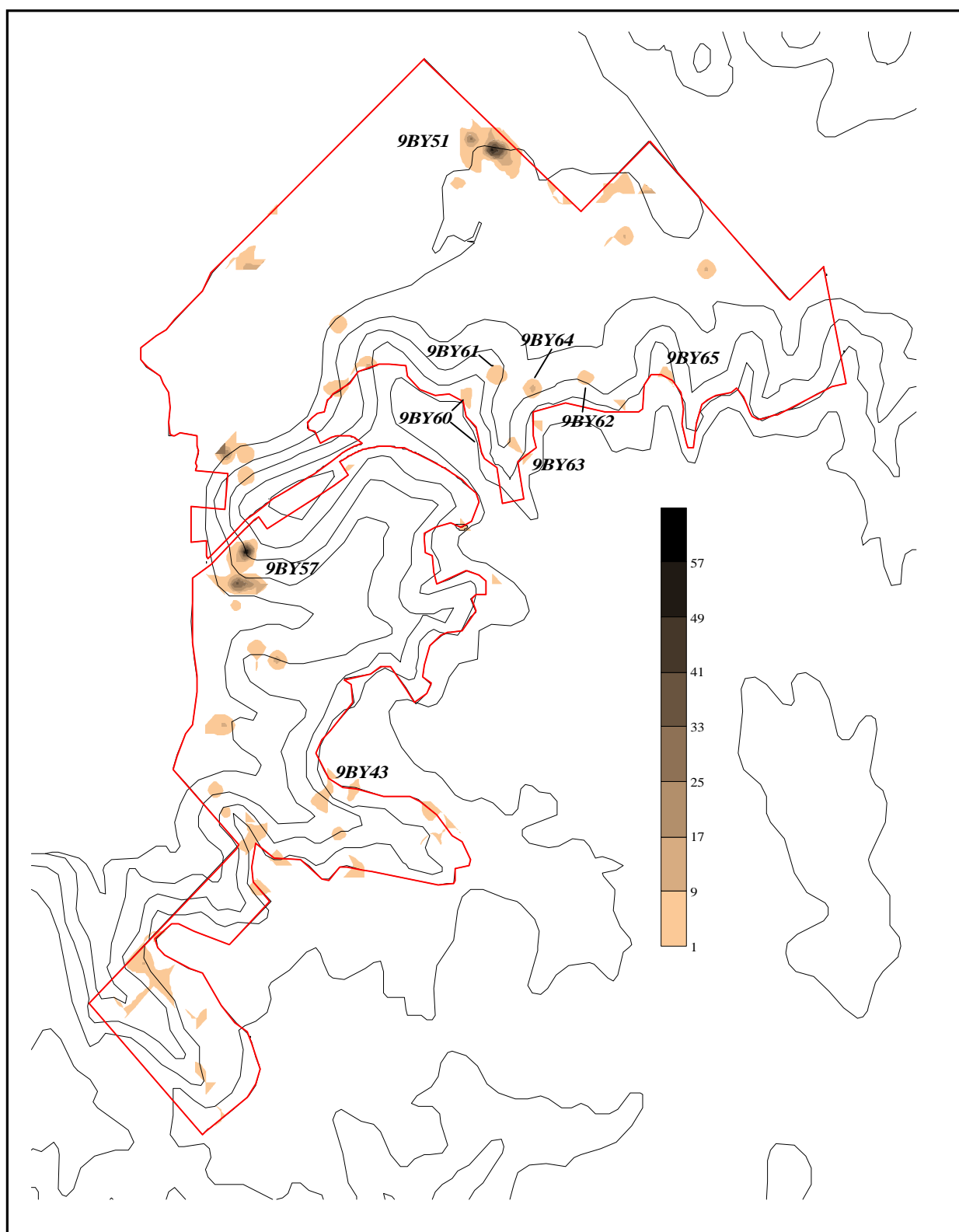


Figure 71. Density of HCPC Debitage.

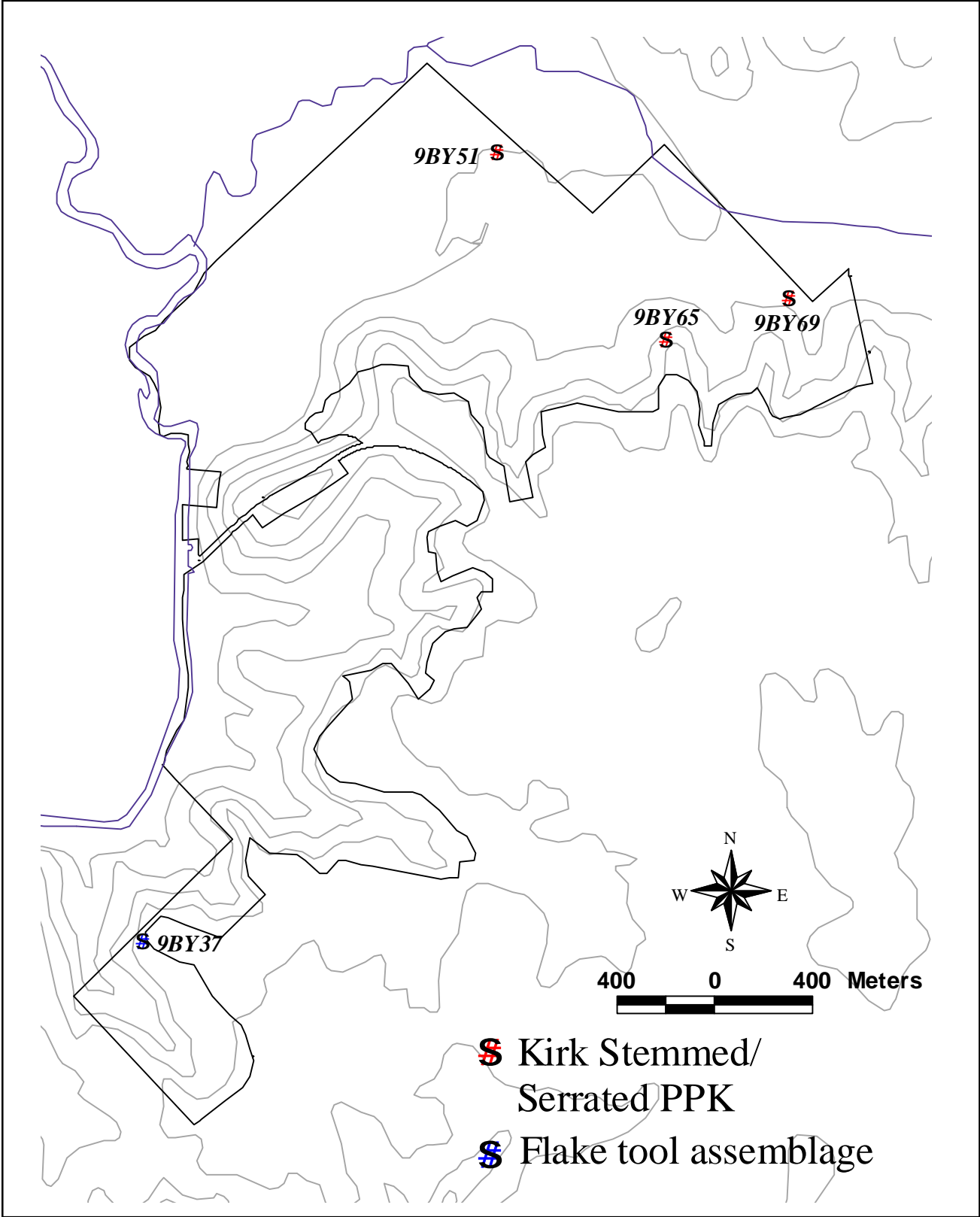


Figure 72. Early Archaic Artifact Distribution.

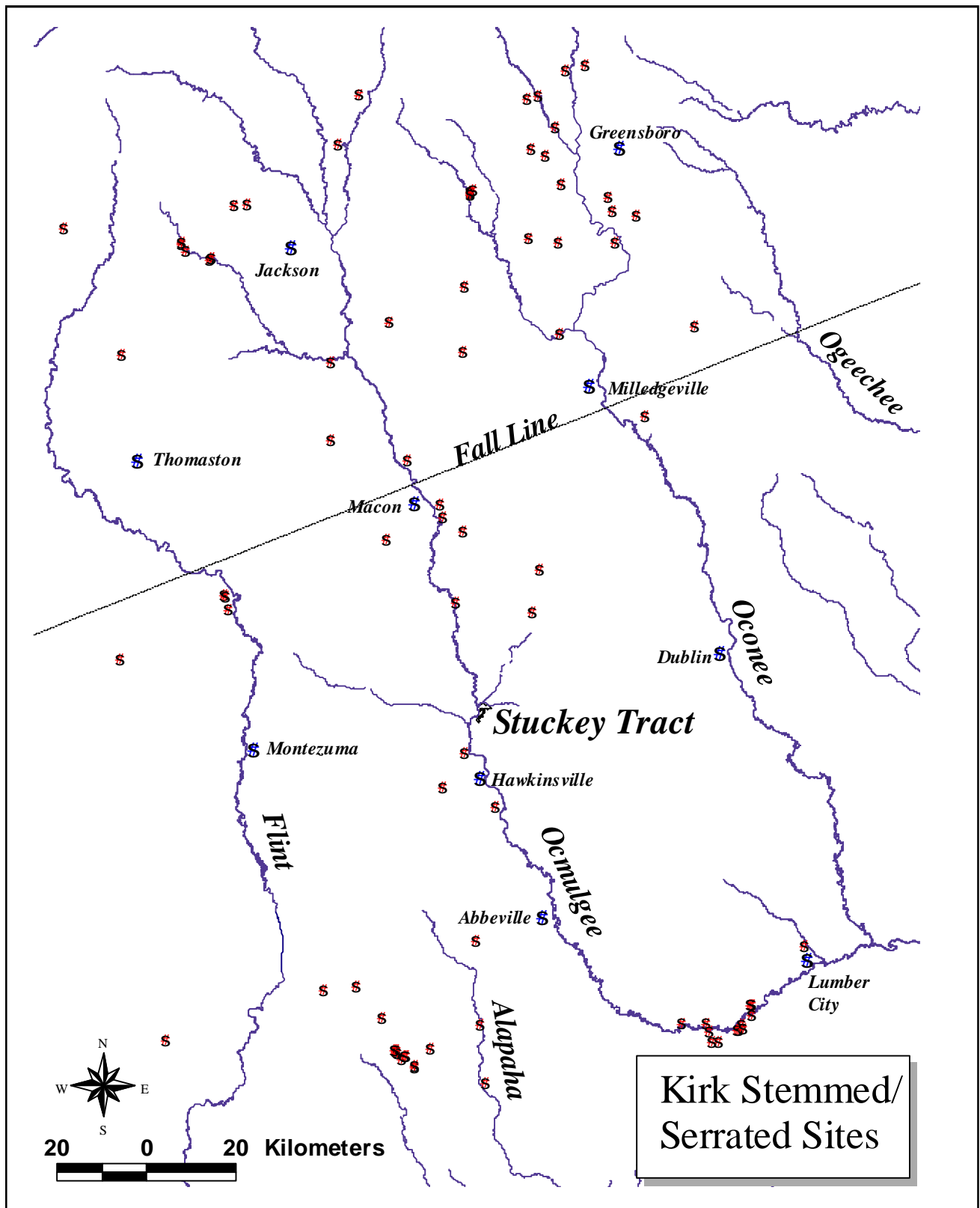


Figure 73. Regional Kirk Stemmed and Serrated Sites.

ter of sites in the Feronia locality. Interestingly, these two site clusters are nearly equidistant from the Gulf – Atlantic drainage divide.

Another drainage divide may be important in the location of two sites. This is the interriverine area between the Ocmulgee and the Oconee rivers. Both located near the head of Shellstone Creek, which flows southwest to empty at the Stuckey Tract, one of the sites lies within the Ocmulgee River watershed and the other within the Oconee River watershed. Unlike the Ocmulgee River Valley however, there is a notable lack of sites along the Oconee River in the Coastal Plain, although numerous sites are located along the Piedmont portion of the drainage.

Based on a study of Early Archaic site distribution in the Southeast, Anderson and Hanson (1988) posited the “band-macroband” model. This model contends that during the Early Archaic period, a band of people (roughly 50-150) occupied a single major waterway from its headwaters to the coast. Macrobands, containing roughly 500-1500 people, were regional social entities comprised of the individual bands. According to this model, the Ocmulgee River is the southernmost drainage in the South Atlantic Slope Macroband; to the south is the Eastern Gulf Coast – Florida Macroband. Within each major watershed, the bands occupied the Coastal Plain from winter to late spring. The presence of significant Early Archaic sites at Fall Line settings throughout the Southeast is offered as evidence that the Fall Line was an important geographic setting (e.g., Anderson 1974, 1979, 1996; Anderson and Hanson 1988; Goodyear 1975; Michie 1971, 1996). Specifically, river terraces along the Fall Line are believed to have served as aggregation loci, where groups from two or more different drainages met for social, economic, and informational interaction.

Indeed, several sites are clustered near the Fall Line in the Macon area upriver from the Stuckey Tract. However, O’Steen’s (1983, 1996) findings in the Piedmont section of the Oconee River Valley contrasts somewhat with the band-macroband model. The exposed shoals along the constricted drainages in this area were extremely attractive to both Paleoindian and Early Archaic populations, and the site distributions during these periods are attributed to this abundant environment. Rather than finding major Early Archaic aggregation sites at the Fall Line, O’Steen found that they tended to cluster at the shoals upstream. By the end of the Early Archaic period, sites were less numerous, more widely dispersed, and no longer clustered at the shoals. O’Steen (1983, 1996) suggests this can be explained by a shift in population or an increased mobility and range for these popula-

tions. Based on the frequency of distinct lithic materials, populations in the northern portion of the study area show an orientation with the Ridge and Valley province in northwestern Georgia, while those in the southern portion evidence more of a Coastal Plain orientation. The mode of lithic material procurement believed to be primarily accountable for these findings is exchange.

In a study of Early Archaic (albeit Palmer-Kirk) settlement in the Coastal Plain of South Carolina, Sassaman (1996:65) stresses the importance of lithic distribution patterns. Allendale chert quarries located in the Coastal Plain Savannah River Valley were extensively utilized, and material from these sources was transported 150-200 kilometers during the Early Archaic (Anderson and Schuldenrein 1983; Anderson et al. 1979; Goodyear 1983; Goodyear et al. 1979). Sassaman’s (1996) South Carolina study supports Anderson and Hanson’s (1988) theory that mobility was oriented along major waterways from the headwaters to the coast.

The distribution of Kirk Stemmed/Serrated sites along these Ocmulgee and Oconee River valleys does not neatly mesh with the Anderson-Hanson (1988) model of complete drainage usage due to the absence of terminal Early Archaic sites in the Coastal Plain portion of the Oconee River Valley. While less work has been conducted within the Coastal Plain portion of the Oconee River Valley than in the Piedmont section, the lack of Kirk Stemmed/Serrated sites is likely not entirely attributable to this factor. The 2002 Georgia Archaeological Site Files database contains approximately 540 sites within the Coastal Plain area of the Oconee River, while nearly double this many sites (n=1016) are present within the Coastal Plain section of the Ocmulgee River. If the range of Kirk Stemmed/Serrated settlement included the Coastal Plain Oconee River Valley, then at least a few components should be present, particularly since a relatively high site density is found upriver in the Piedmont.

This suggests that the absence of sites in the Coastal Plain Oconee River Valley may in part be due to the general paucity of knappable material along this stretch. However, the dense cluster of Kirk Stemmed/Serrated sites in the Feronia locality downriver from the Stuckey Tract (Snow 1977a, 1997b; Blanton and Snow 1989) cannot be explained similarly. This area does not contain knappable stone sources, yet many of the sites yielded intensive Coastal Plain chert reduction assemblages. As Elliott and Sassaman (1995:149) point out, the groups in the Feronia locality imported large quantities of chert. The precise origin(s) of this chert is unknown. According to the *Geologic Map of Georgia* (Georgia Department of Natural Resources 1976), the Suwannee Limestone



geological formation extends downstream from the Stuckey Tract approximately 45 kilometers, to the vicinity of the town of Abbeville, but it is unknown if knappable chert is available within this formation. The Ocala Limestone formation extends through southwest Georgia, ending along the Ocmulgee within the Stuckey Tract; significant sources of chert have been documented within this formation, such as those exposed along the Coastal Plain portion of the Flint River. At this time it is unknown if the chert within the Stuckey Tract outcrops within the Suwanee formation or the Ocala formation. The near-absence of sites in the area between the Stuckey Tract and the Feronia locality in the Big Bend may indeed indicate that chert is not available within this stretch of the river, and the chert resources found within and near the Stuckey Tract would have been significantly attractive to Early Archaic groups. Thus, it is likely that chert from the Stuckey Tract vicinity was transported downriver to the Feronia locality *en masse*. The distance between the Stuckey Tract and the Feronia locality is approximately 85 kilometers, well within the range of transport documented for Allendale chert in South Carolina (Anderson and Schuldenrein 1983; Anderson et al. 1979; Goodyear 1983; Goodyear et al. 1979; Sassaman 1996). Alternatively, the cluster of sites to the west of the Feronia locality may be evidence that the chert was acquired from the Flint River region.

The interriverine sites found north of the Stuckey Tract may be significant in that they represent a link between the populations found in the Piedmont portion of the Oconee River and those found in the Coastal Plain portion of the Ocmulgee River. Additionally, although meager evidence, one piece of non-local Ridge and Valley chert (debitage) was found in the excavation level above the Kirk Stemmed PPK at 9BY51, perhaps suggesting a link.

The general site type distribution of Early Archaic sites – residential base camps along river terraces, shorter-term special-activity sites in the surrounding uplands – may be mirrored within the Stuckey Tract. Unfortunately, interpretation of the Early Archaic sites within the Stuckey Tract and their function within the settlement-subsistence system is problematic due to the survey level of the project – we simply do not have enough data to allow categorical statements to be made. The deeply-buried stratigraphic position of a single Early Archaic diagnostic at 9BY51 implies that associated remains are probably intact. Any future investigation(s) of these Early Archaic sites will hopefully yield data which can be used to address these issues.

### *Late Archaic*

Diagnostic Late Archaic PPKs recovered from the Stuckey Tract survey include forms fitting the type descriptions (e.g., Bullen 1975; Cambron and Hulse 1975; Powell 1990; Whatley 2002) of Kiokkee Creek, Abbey, Bascom, Putnam, and Savannah River. Fiber tempered and mixed fiber/sand/grit tempered pottery was recovered as well. Two pieces of soapstone were recovered from the Stuckey Tract from adjacent excavation units (shovel test D129Z and Test Unit 1) both of which were located at the residential base camp at 9BY51. Neither of these artifacts are in any recognizable form (e.g., vessel fragment), although one of them evidences some smoothing. While not as diagnostic as fiber tempered pottery, soapstone is a fairly reliable indicator of Late Archaic activity.

Late Archaic sites are densely distributed within the Ocmulgee, Oconee, Satilla, and Flint River valleys (Figure 74). Just south of the project area, four Late Archaic sites were identified during the survey (Gresham 1999) and testing (Benson et al. 2001) of the Bleckley County Public Fishing Lake (these are not shown on the regional site distribution figure). While some of the sites appeared to have been relatively intensely occupied during this period, the nature and duration of the occupations are unclear (Benson et al. 2001). Numerous sites are present between the Stuckey Tract and the Fall Line along the Ocmulgee and its tributaries, with the highest concentration at the Fall Line. Downriver in the Big Bend and the Satilla River region, numerous Late Archaic sites are present. Unlike the preceding late Early Archaic period, sites are present within the Coastal Plain portion of the Oconee River, albeit at a low density. However, in the Piedmont section of the same drainage, Late Archaic sites are densely distributed, attributable to the large amount of survey conducted in the Wallace Reservoir/Lake Oconee and the Oconee National Forest. Sites are much more sparse in the interriverine area between the Ocmulgee and Oconee rivers.

Within the Stuckey Tract, the Late Archaic remains evidence an intensive and widespread occupation (Figure 75). The data indicate that Late Archaic peoples employed a foraging settlement/subsistence strategy, in which small groups ranged into the uplands from a residential base camp located in the bottomlands at 9BY51. These resource-extractive forays are evidenced by Late Archaic diagnostic materials at 9BY37, 9BY41, 9BY56, 9BY57, and possibly 9BY46. Late Archaic ceramics are found in comparative abundance at the residential base camp at 9BY51 (n=64), while a very small number of sherds were found at 9BY56 (n=3) and 9BY57 (n=1). The distribution of the fiber tempered wares within the Stuckey

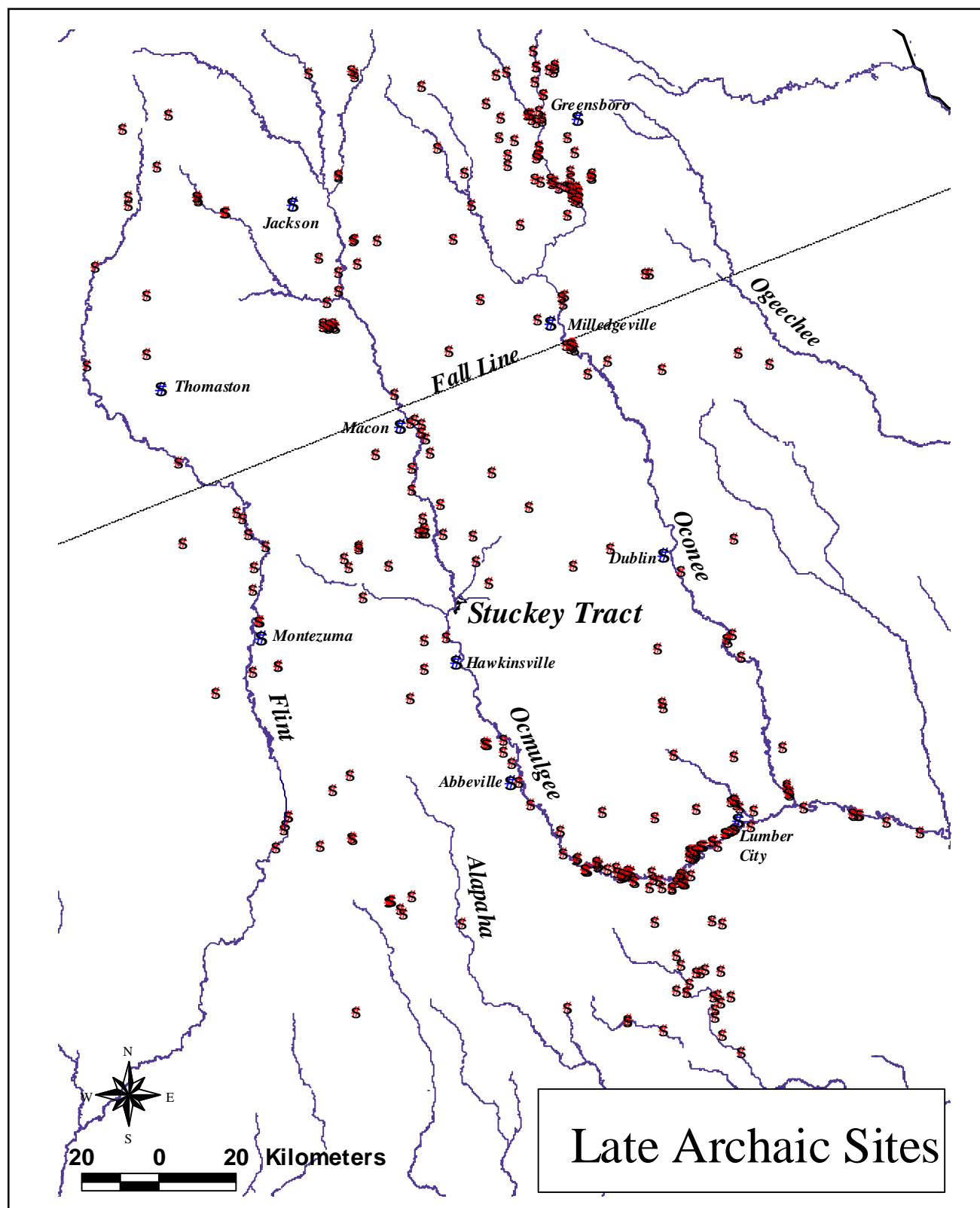


Figure 74. Regional Late Archaic Sites.

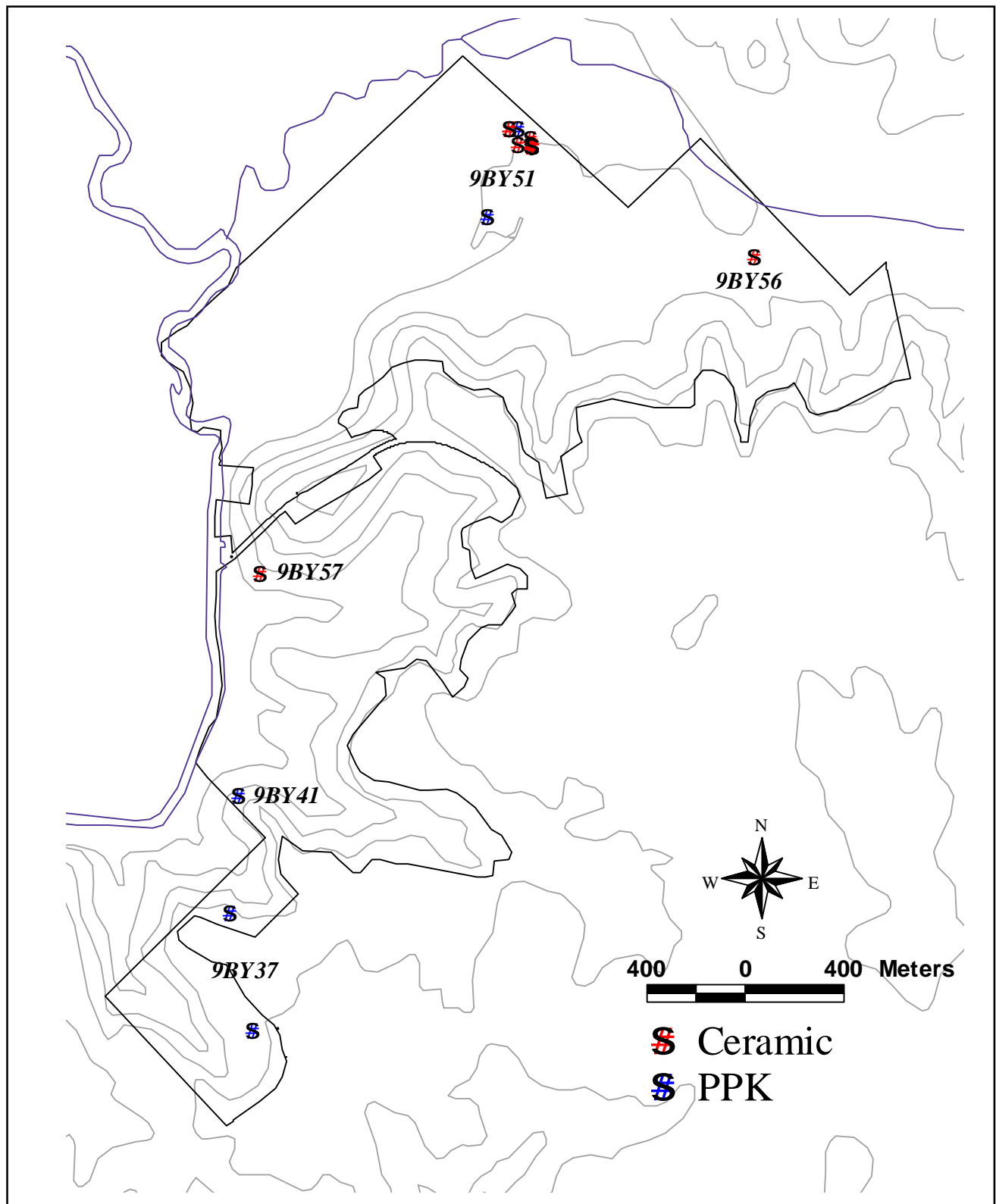


Figure 75. Late Archaic Artifact Distribution.

Tract is closely tied to nearby floodplain habitats: each of these sites has immediate access to vast swampy floodplains, including those of the Ocmulgee River and South Shellstone Creek. The two fiber tempered pottery sites in the uplands appear to have been short-term encampments, at which heating/cooking activities occurred. More substantial remains were found at the base camp, suggesting longer-term and more intensive occupation. Although a moderate amount of shell was found in the levels above the Late Archaic stratum in Test Unit 1, none was found within the Late Archaic levels (other than negligible amounts), indicating that shellfish were not a regular component of the subsistence base.

Strongly influenced by the presence of chert sources within the Stuckey Tract, Late Archaic lithic technological organization included the use of both formal and expedient strategies. Late Archaic formal stone tools were found at two sites which contain chert outcroppings: 9BY37 and 9BY41. Material from such outcrops was reduced into cores and then transported where needed. Interestingly, there is evidence that very large cores were moved a short distance to be cached at a specific [non-chert source] location. At 9BY56, located at the interface between the uplands and the swamp, the Late Archaic peoples cached these very large cores, apparently made from material acquired upslope a few hundred meters away at sites 9BY55 and/or 9BY65. These large cores appear to have been used for the production of flake blanks which were then fashioned into bifaces. The site was likely visited at regular intervals, so that Late Archaic knappers could restock their toolkits. Conversely, cores of a more portable size were also employed for the production of expedient flake tools. At the base camp, evidence was found for an intensive core reduction activity area at which uniformly-sized (0.5" size class) flakes were produced to be used as expedient tools. Late Archaic cores occur in both random and bifacial forms, and some of the bifacial cores also functioned as tools themselves, generally for heavy-duty chopping/cutting tasks. The data from these sites also indicate that Late Archaic peoples generally preferred to heat-treat the chert to be used for biface production, while expedient tools were typically made from unheated chert cores.

#### *Early – Middle Woodland*

Diagnostic artifacts from the Early and Middle Woodland periods include a Yadkin PPK, a Thelma PPK, Deptford Check Stamped and Simple Stamped pottery, and Swift Creek pottery (Figure 76). Given the limited nature of the data sample, determining the nature of these components and the relationships among them is difficult, and awaits more excavation data. In the Coastal Plain, Deptford pottery often occurs

with Early Swift Creek pottery, most notably in the Big Bend region (Figure 77). Additionally, minor amounts of Weeden Island pottery are often found in association with Swift Creek remains, and the two cultures are closely tied (Milanich 2002). Many of the sites in the Big Bend area are described as small, seasonal resource extraction locations, with central or base sites interspersed among these. Sites are frequently located next to a floodplain at the confluence of a stream with a river, or on high, relict sand dune terraces in a floodplain (Stephenson et al. 2002).

The Swift Creek occupation of the Stuckey Tract was relatively limited in distribution, with two sites (9BY51 and 9BY57) containing Swift Creek pottery. However, the data from Test Unit 1 at 9BY51 indicate that this occupation may have been relatively intensive, and it is possible that this occupation was partially responsible for the construction of the mound at the site, if indeed it is a mound. All of the radiocarbon dates obtained from the shell samples, recovered from the test unit at 20-30 cmb, 30-40 cmb, and 50 cmb, fall within the Middle Woodland period, ranging from 1600 – 1830 YBP. Furthermore, a radiocarbon date of 1320 ( $\pm 40$ ) YBP was collected from charcoal recovered between 60 and 70 cmb, the same level that two potential Swift Creek Complicated Stamped and numerous fiber tempered sherds were recovered. Alternatively, it is possible that the shell remains were left by the Deptford occupants, as their dates fall within the Deptford II phase (2000 – 1500 YBP) defined by Sassaman et al. (1990).

Keeping the limited nature of the testing and the concomitant small sample size in mind, within Test Unit 1 at 9BY51, the Deptford ceramics were nicely contained within adjoining levels, all of which were situated within the midden, while the tentatively-identified Swift Creek sherds were recovered from three discontinuous levels. Half ( $n=3$ ) of the Swift Creek sherds were recovered from a level above the upper-most Deptford ceramics.

Also, the presence of sherds representing several other pottery traditions (i.e., Napier, Satilla, Stallings Island, Deptford, Weeden Island, Vining, Savannah, Etowah, and Woodstock) in these levels must be kept in mind. Table 23 shows the distribution of these sand/grit tempered wares within Test Unit 1.

Both of the formal Early – Middle Woodland stone tools were recovered at chert sources. The Yadkin PPK was found on the surface in association with plain pottery, a unifacial chopping/cutting tool, and debitage. Dated to between 2500 and 1500 YBP (Whatley 2002:127), the Yadkin type is common in the Piedmont but less so in the Coastal Plain. The

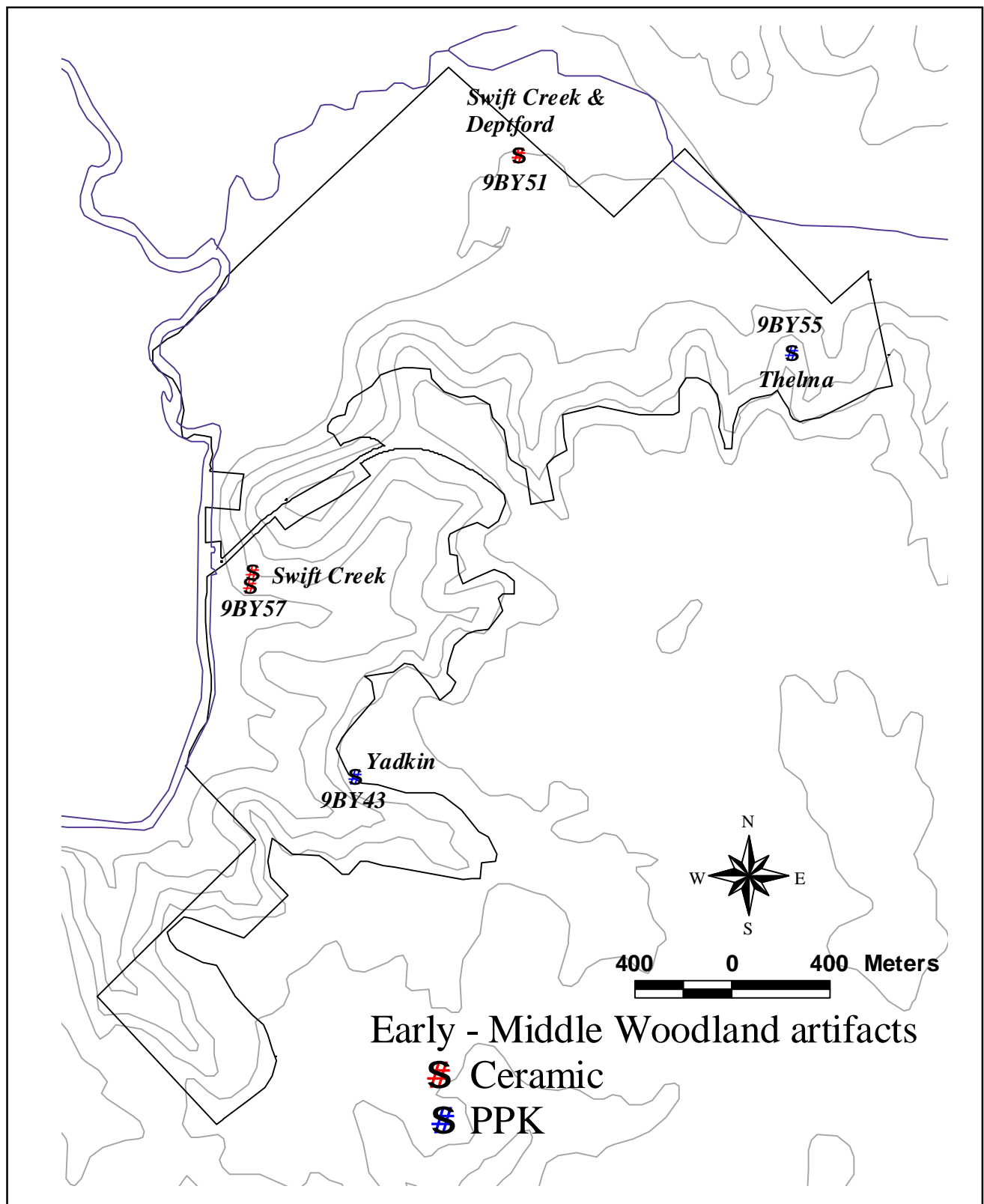


Figure 76. Early - Middle Woodland Artifacts.

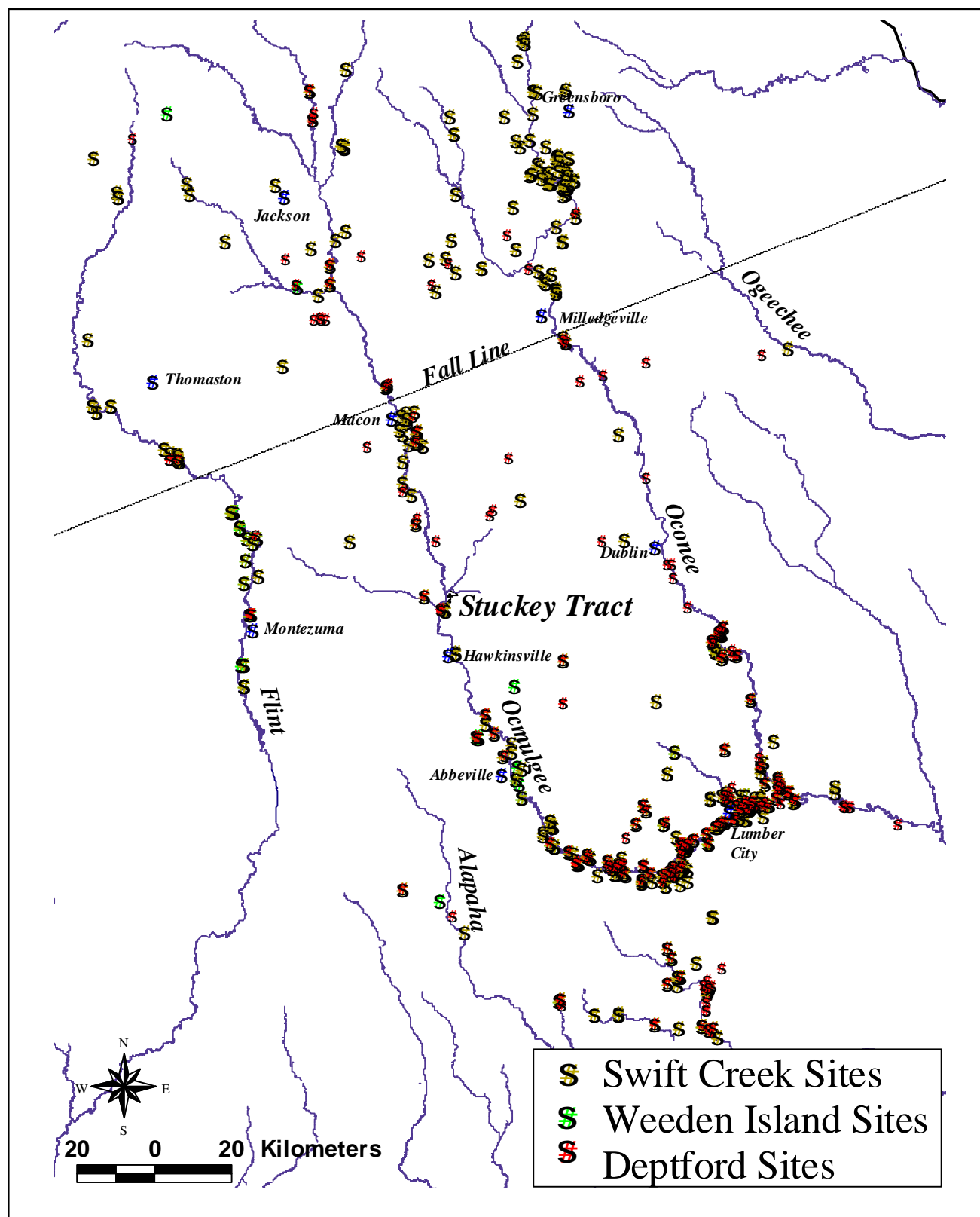


Figure 77. Regional Swift Creek, Weeden Island and Deptford Sites.



Table 23. Woodland - Mississippian Pottery Distribution in Test Unit 1, 9BY51.

Level	Deptford	Swift Creek	Weeden Island	Napier	Woodstock	Vining	Etowah	Savannah	Plain
1						2			4
2									5
3		3			1	2	2	1	7
4	5		1	1		1			10
5	2	1							1
6	1								1
7		2							
Total	8	6	1	1	1	5	2	1	28

Thelma PPK was recovered from the road surface of quarry site 9BY55. This artifact resembles the Thelma type, an Early Woodland type estimated to have been produced between approximately 2700 and 2000 YBP (Whatley 2002:119). Despite being found on the surface with debitage, little can be deduced from these finds concerning settlement, mobility, and lithic organization. However, Yadkin points are commonly found with Deptford ceramics, and Thelma points are associated with the Early Deptford phase (Sassaman, in Whatley 2002:119), suggesting that both of these artifacts may be associated with the Deptford occupation at 9BY51.

Lithic organization during this time frame, as evidenced in the midden deposit of Test Unit 1, indicates that biface and expedient tool production were important components. Only one core was found, made from a quartz cobble; this may have been chipped using a bipolar method. Over 92% of the debitage is 0.25" and 0.5" in size, with the former comprising the majority of this. Less than 1% of the debitage assemblage is of non-chert, accounted for by several pieces of quartzite. Of the chert debitage, just over half (54%) was not heated. Expedient tools include utilized flakes and informal unifacial and bifacial flake tools. A PPK fragment of HCPC was recovered which exhibits a concave triangular base, yet its diminutive size prevents a determination of its type or age, particularly whether it represents a large triangular PPK (Yadkin) or a small triangular PPK (Late Woodland – Mississippian).

The recovery of Swift Creek pottery with Vining Simple Stamped pottery in Test Unit 1 at 9BY51, and from a shovel test at 9BY78, suggests an association between these two pottery traditions, although in the latter case, the Swift Creek sherd is a plain scalloped/notched rim indicative of Early Swift Creek design. Nevertheless, the tail end of the Swift

Creek pottery tradition overlaps with the beginning of the Vining simple stamped tradition, circa 800 A.D. The Swift Creek tradition in the project vicinity appears to extend even later, for at the Hartford Mound site just downriver from the Stuckey Tract, three radiocarbon dates for Swift Creek pottery place it around 900 A.D. (Stephenson et al. 2002:338).

#### *Late Woodland – Mississippian*

Interestingly, there is very scant evidence in the Stuckey Tract of the contemporaneous Late Woodland peoples who were producing cordmarked pottery in the Lower Ocmulgee River Valley area south of the Stuckey Tract, as only a single cordmarked sherd was recovered from the project area. The dominance of Vining and virtual absence of Ocmulgee is intriguing given the dominance of cordmarked ceramics in the Lower Ocmulgee River Valley. While Vining sherds are found south of the Stuckey Tract down to and including the Big Bend, the conspicuous paucity of cordmarked sherds north of Hawkinsville suggests that the northern limit of Ocmulgee cord marked populations was located in this area. Worth and Duke (1991) cite evidence from excavations at the Mill Creek site (Gresham et al. 1989) in Americus that cordmarked ceramics predate the Vining phase. However, the Ocmulgee cordmarked tradition within the Big Bend area has been dated to between 1150 and 750 B.P. At Raccoon Ridge, the Vining phase has been OCR-dated between approximately 985 and 815 YBP, while two radiocarbon dates at the Tarver site upriver at the Fall Line returned a range roughly between 1000 and 900 YBP (Pluckhahn 1997:47). These absolute dates fit well in the span for the Vining phase by Elliott and Wynn (1991:12), who posited a span between 1200 and 800 YBP for the Vining phase, with the peak between 1050 and 850 YBP. This suggests that Vining simple stamped and Ocmulgee cordmarked were roughly contemporaneous traditions. The fact that

Mossy Oak/Vining wares are commonly found on sites containing Ocmulgee cordmarked wares in the Big Bend region lends further support to the supposition that the northern cultural boundary for the Ocmulgee cordmarked tradition is located in the vicinity of the Stuckey Tract.

The Late Woodland/Early Mississippian occupation of the Stuckey Tract project area was intensive, and is attributable primarily to the Vining culture. Vining simple stamped pottery was found at ten sites (9BY35, 9BY51, 9BY54, 9BY57, 9BY58, 9BY60, 9BY63, 9BY65, 9BY71, and 9BY78), as well as at an isolated find (IF B283Z). Not only were these wares recovered from shovel tests and Test Unit 1 in association with Swift Creek pottery, but they were also found with plain, Napier, Weeden Island, Woodstock, Etowah, and Savannah wares. They were also recovered in association with small triangular PPKs at several sites.

Vining period settlement is concentrated in the central to northern portion of the Stuckey Tract, above the vast swampy bottomland of the river and South Shellstone Creek (Figure 78). All but one of the Vining sites are located in the uplands, similar to the settlement patterns found in other areas of the state (Worth 1996; Worth and Duke 1991; Elliott and Wynn 1991; Meyers et al. 1996, 1999). Most of the Vining sites in the study area are located on the ridge spurs of the flat upland terrace, while there are a couple of outliers in the southern portion of the project. The distribution of these sites along this upland terrace are evidence of a significant Vining community. Sites 9BY57, 9BY78, and 9BY65 appear to represent villages, while several smaller sites (9BY63, 9BY58) may represent short-term resource-extraction or special-activity loci. At 9BY65, over 300 simple stamped sherds were recovered, representing over 97% of the identifiable ceramics from the site. This percentage of simple stamped sherds within a Vining assemblage far exceeds the proportion of simple stamped sherds in Vining assemblages from other documented Vining sites in Georgia. The reason for such a high proportion of decorated sherds is unknown at this time. The site distribution also hints strongly that the Vining occupation covered a significant portion of the upland flat, which unfortunately was out of the project boundary. Nevertheless, these sites are spread over a length of 2.3 kilometers along this ridge bordering the vast bottomlands of Shellstone Creek and the Ocmulgee River.

Figure 79 shows the distribution of sites with Vining and Mossy Oak ceramics in central Georgia. Apart from the numerous sites in the Oconee National Forest area (Elliott and Wynn 1991; Meyers et al. 1999), numerous sites are clustered upriver from the Stuckey Tract at the Fall Line.

Downriver, numerous Mossy Oak/Vining sites have been recorded by Snow (1977a, 1977b) in the Big Bend area. Several sites are located along the Coastal Plain portion of the Oconee River, and a few are located on the Altamaha River beyond the confluence of the Ocmulgee and the Oconee Rivers. Vining sites do occur in bottomland settings, albeit infrequently; two notable examples are the Shinholser Mound (Williams 1990) and Scull Shoals (Williams 1992) in the floodplain of the Oconee River to the northeast. Within the Stuckey Tract, a low to moderate frequency of Vining ceramics (n=10) were found in a bottomland setting at site 9BY51. These sherds were recovered from four shovel tests and Test Unit 1, covering an approximately 90 x 30 m area within and around the possible mound/disturbed area, which was the most intensively occupied portion of the site. Within the test unit, four of the five simple stamped sherds were recovered from the plowzone above the midden, while one was recovered from the upper portion of the midden.

Another midden was identified in a shovel test on the ridge top at 9BY78, containing a Vining simple stamped sherd, a plain notched rim sherd believed to be Early Swift Creek, unidentified plain sherds, and a single unidentified seed which may represent subsistence remains. While further testing is necessary to firmly establish the cultural origin of this midden, Vining Simple Stamped sherds are the dominant identified ware at the site, and most of these were recovered from this area of the site.

Lithic organization during the Late Woodland/Early Mississippian period is characterized by the use of both formal and informal tool technologies. Small triangular arrowheads are diagnostic, while unretouched and retouched flakes served as expedient tools. The chert used for such tools was often modified by heat treatment. At 9BY57, an intensive late stage reduction and maintenance activity area was identified, in which small-sized (0.25" & <0.25") heat-treated debitage and utilized flakes predominate. The predominantly small size of the debitage indicates that at least some of it remains from the manufacture and maintenance of small triangular points.

Worth (1996) performed scanning electron microscopy of Vining lithic artifacts from the Raccoon Ridge site, which is located in the Piedmont in the Oconee River Valley. He found that the predominant raw material used for chipped stone tools was fossiliferous Coastal Plain chert. The color ranged from mustard yellow to olive green to chocolate brown. The material was often heat treated, resulting in brick-red and purple colors. Worth (1996) feels that the vast majority of this material was transported in bulk from a single source in the Coastal Plain to the site, where it was reduced. Such a sce-

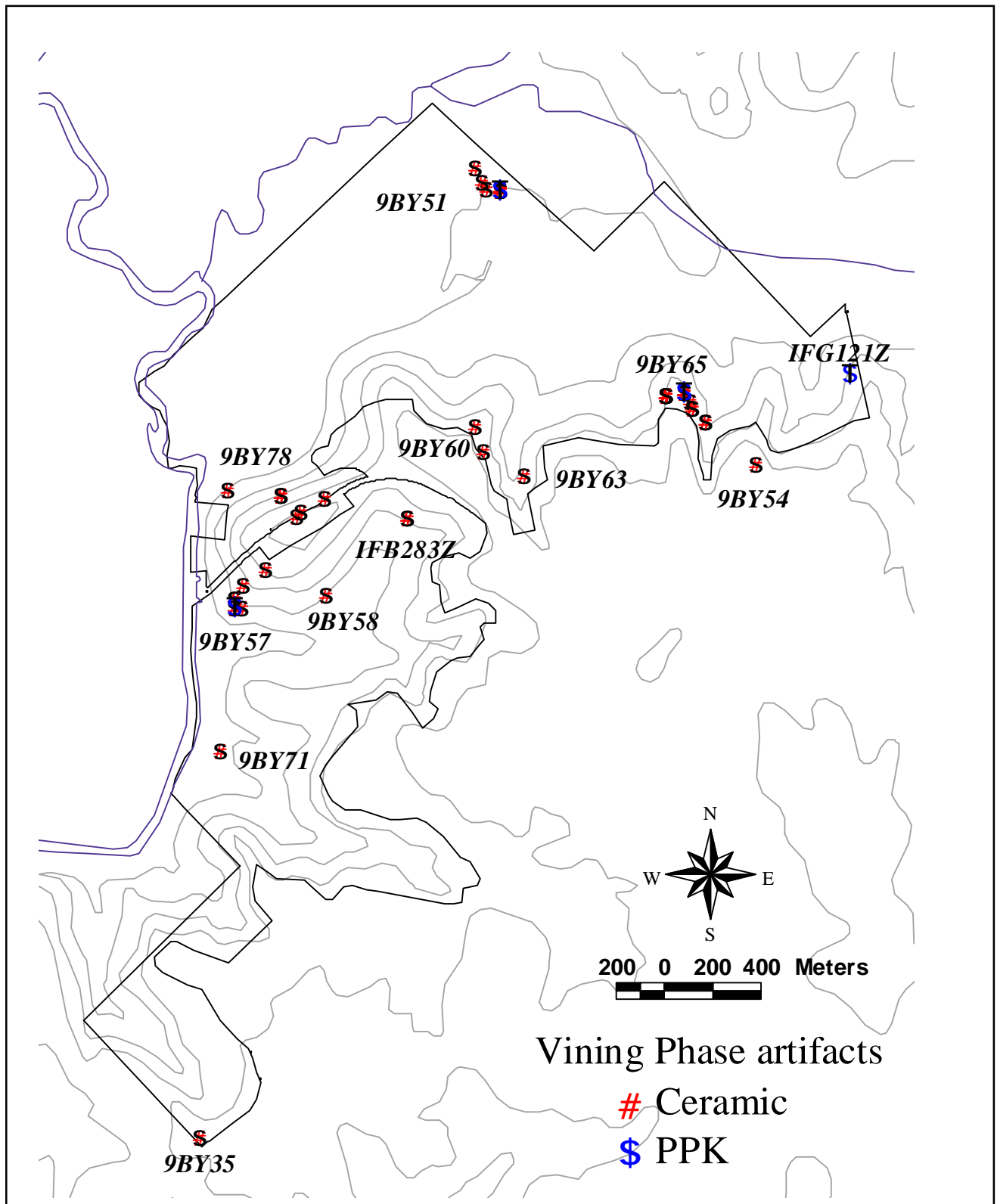


Figure 78. Vining Phase Artifact Distribution.

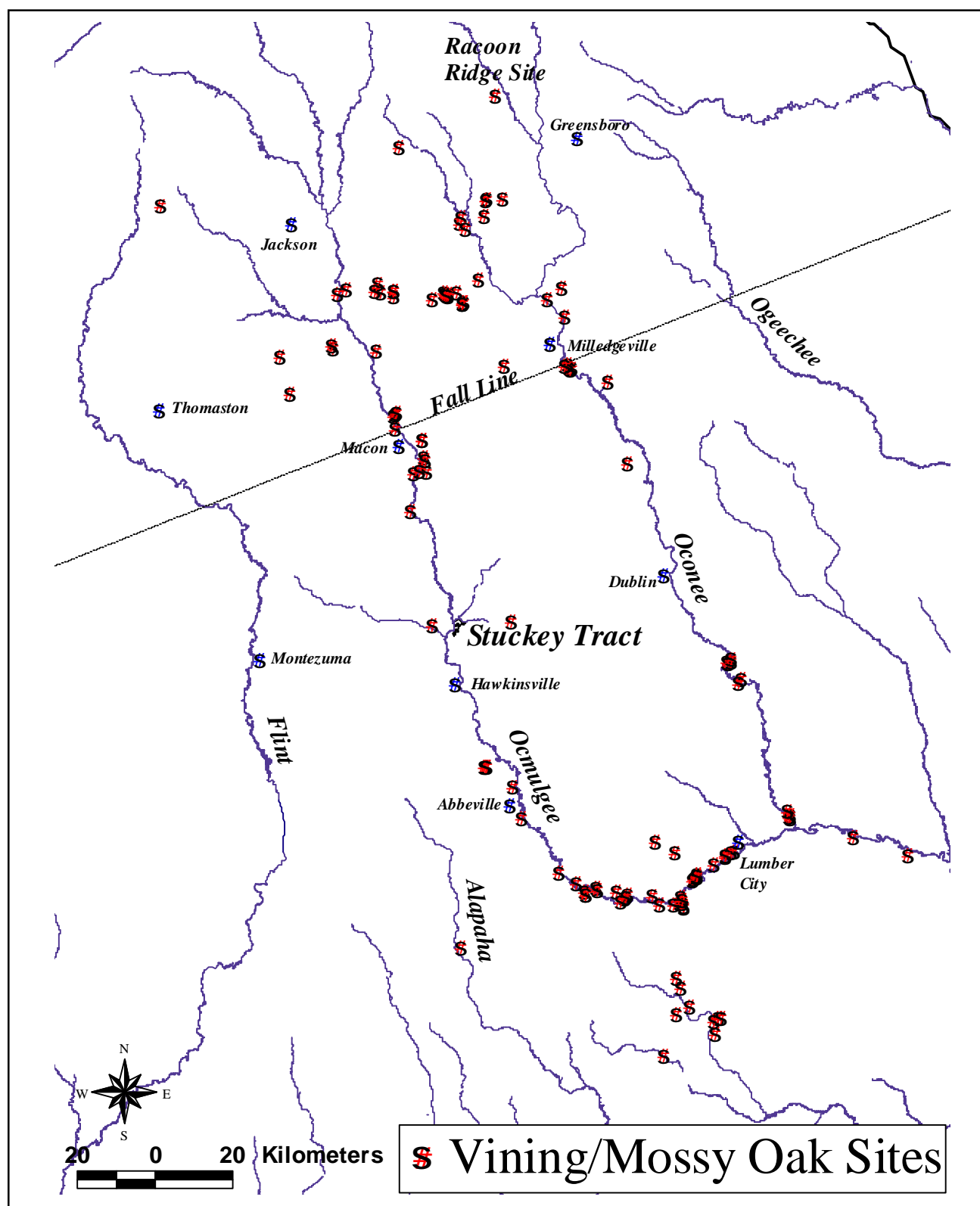


Figure 79. Regional Vining and Mossy Oak Sites.

nario is intriguing given the intensively-occupied (Vining) Site 9BY65, which is located atop a significant Coastal Plain chert source. As described earlier, the material at this source is almost exclusively whitish-yellow, and contains macroscopic fossils in the cortex. The ridge sides on which the chert is exposed have been heavily eroded, yet, based on the survey data, it is impossible to discern if this is a result of intensive quarrying by the Vining peoples, historic silvicultural and agricultural activities, or some combination of these factors. In addition to this specific source, chert matching all of the colors described by Worth (1996) is widely available from the project area. Conversely, the chert at Raccoon Ridge could have come from a source along the Oconee River in the Coastal Plain, as Suwannee Limestone (which presumably contains chert) is mapped north of the city of Dublin. However, the presence of the significant Vining community within the chert-laden Stuckey Tract hints at an association between these two locations. In order to investigate this possibility, chemical and mineralogical composition analyses of the chert from both the Stuckey Tract and the Raccoon Ridge site would be necessary.

Within Test Unit 1 at 9BY51, numerous Late Woodland and Mississippian pottery types are associated, specifically Vining, Weeden Island, Swift Creek, Napier, Woodstock, Etowah, and Savannah. Many of the Vining/Mossy Oak sites upriver at the Fall Line also yielded Swift Creek, Deptford, and Napier wares, and a couple also yielded Macon Plateau pottery. Fairbanks (1946) found Napier, Swift Creek, and Vining pottery in the humus under the earthlodge at Macon Plateau, and suggested that little or no time elapsed between these occupations, indicating that they were contemporaneous. At the Shinholser site on the Oconee River, Williams (1990) documented simple stamped pottery in a pre-mound midden deposit, and believes it was at least partially contemporaneous with the Savannah period occupation. Further up the Oconee River at the Raccoon Ridge Site, Etowah, Woodstock, and Savannah complicated stamped pottery constitute a minority of the Vining phase ceramic assemblage (Worth 1996:64). A study of sites at the headwaters of the Flint River in Henry County, located in the Piedmont upriver of Macon Plateau, indicates that individual potters were producing both Napier and Swift Creek designs (Espenshade et al. 1998).

Further down the Flint River in Dooly County in the Coastal plain, a connection between the Vining and Weeden Island cultures was found at the Hogcraw Creek site (Worth and Duke 1991:35). At this site, stratigraphic data indicate that a minor Weeden Island II occupation, evidenced by Wakulla Check Stamped and other Weeden Island ceramics, preceded the Vining occupation. Additionally, the design configura-

tion of a couple of the Wakulla Check Stamped sherds resembled the Vining simple stamped sherds. Survey of the Middle Flint River region (Worth 1988:120-1; Worth and Duke 1991:35) revealed an intensive Weeden Island occupation along the valley. At the Stuckey Tract, one Weeden Island diagnostic was found, a plain rim recovered from the same level of Test Unit 1 as a Vining simple stamped sherd. Less than five kilometers south of the Stuckey Tract is a significant Weeden Island site known as the Shelley Mound (9PU3). The site was briefly investigated, but apparently no formal report or documentation has ever been published; site file data are minimal as well. Nevertheless, the site contained a low Weeden Island burial mound, which yielded 11 human burials and a cache of 60 pots. An Etowah village was located across the gully in another portion of the site (Frankie Snow, personal communication 2003; Mark Williams, personal communication 2003; and Bill Phillips, personal communication 2003). It is unknown if Vining pottery was found at the site.

As pointed out by Williams (1994:135), there is a long tradition of complicated stamping, running from the early Woodland period until historic times: the Napier and Woodstock complicated stamping complexes plainly follow in the tradition of late Swift Creek, and Etowah and Savannah clearly follow these. Similarly, there is a long history of simple stamping, with this decoration seen on terminal Late Archaic fiber-tempered wares and its use continuing through historic times as well. The florescence of the simple stamping tradition is clearly during the late Woodland/Early Mississippian time frame. So, at the same time that several regional complicated stamping complexes developed out of the Swift Creek tradition (see Pluckhahn 1994; Meyers et al. 1996), simple stamping became a major ceramic tradition itself.

The regional data are at present insufficient to define the precise temporal and cultural relationships among these various Late Woodland/Early Mississippian traditions, yet work in the state of Georgia, including the present study, is beginning to shed more light on them. The data suggest that the development of the Mississippian cultural system involved many groups which are traditionally and often rigidly defined in terms of ceramic traditions. The stark contrast between linear and seemingly haphazard simple stamped pottery and well-executed complicated stamped pottery may provide clues to the cultural differences between these groups. Working from the premise that decoration on pottery serves to express the ethnic identity and affiliation of the makers, the Vining simple stamped pottery makers clearly were differentiating themselves from complicated stamped pottery mak-

ers. The simple stamped tradition may have been in part a direct response by local populations to encroachment by contemporaneous non-local Etowah and other more “Mississippian” groups. The identification of a circular residential structure of Vining construction at the Racoon Ridge site (Worth 1996) provides additional evidence for a cultural gap between Vining peoples and contemporaneous Etowah groups, in that Etowah peoples constructed larger, rectangular wall-trench structures. The preference for uplands as habitational loci may not necessarily have been a preference, but rather a necessity, if river terraces and bottomlands were the domain of Etowah groups. The lack of other Mississippian hallmarks, such as maize agriculture and mound construction, is also cited as evidence that the Vining peoples clung to their Woodland hunting-gathering roots rather than joining their Mississippian agricultural contemporaries (e.g., Elliott and Wynn 1991; Meyers et al. 1996, 1999).

However, as discussed above, many sites at the Fall Line upriver from the Stuckey Tract have yielded evidence that Vining peoples were directly interacting with both complicated stamped pottery producers and Macon Plateau populations (Fairbanks 1946; Williams and Henderson 1974; Pluckhahn 1997). At the Tarver site, Pluckhahn (1997) found Vining and Macon Plateau ceramic wares in association, using it to suggest that Vining peoples were not as culturally reclusive and isolated as previously thought (see Meyers et al. 1996, 1999).

Hally and Rudolph (1986:86) point out that the Ocmulgee River valley was the apex of sociopolitical complexity during the Early Mississippian period, yet the Late Woodland setting in which this phenomena developed is poorly understood. Generally, little is known about the culture(s) who inhabited the Ocmulgee Valley near Macon from approximately 1300 – 1100 YBP (Knight 1986:103-4). A possible developmental scenario which may explain the archeological record of Georgia at this time may be as follows. During the early portion of this period, around 1100 YBP, non-local “Mississippian” groups settled in the Fall Line area of the Ocmulgee River, where local Swift Creek, Napier, and Vining populations co-existed. Local populations initially cooperated with the immigrants, leading to the ceramic associations which we see in the archaeological record. Napier and Swift Creek Complicated Stamped traditions developed into the Woodstock and Etowah traditions, while Vining simple stamping continued as is. As the sociopolitical power of the Mississippian Etowah groups increased in the Piedmont, local populations began to diverge from them, maintaining and asserting their traditions. Conflict between the Vining populations and the Mississippian groups became more common,

marked archaeologically by the presence of palisaded villages and the widespread occurrence of small triangular arrow points. Since the uplands were used by Mississippian groups primarily for short-term resource extraction activities, the Vining populations tended to concentrate in these areas, where it was safer to establish villages. Hunting-gathering of upland resources was the primary subsistence base of the Vining population. Conversely, the bottomlands were primarily the domain of the Mississippian peoples, where agricultural pursuits were much more fruitful. Perhaps in part due to local resistance, Etowah/Mississippian occupation of the Fall Line area of the Ocmulgee River Valley was short-lived and ultimately unsuccessful.

There is evidence that the Stuckey Tract was only minimally inhabited following the Late Woodland/Early Mississippian Vining occupation. Only one site, 9BY51, contained Middle Mississippian diagnostics, specifically Etowah and Savannah wares; no outlying sites were discovered. The Etowah and Savannah wares were recovered from Level 3 of Test Unit 1, just above the midden, in association with Vining simple stamped, Woodstock, and Swift Creek sherds. The artifact assemblage from 9BY51 adheres closely to the material traits defined for the Pulaski phase identified by Stephenson et al. (1996:23) for the Big Bend area downriver. This phase dates from 725 to 650 YBP, and the overlap of these ceramic types suggests that the Etowah/Savannah occupation occurred during the early portion of the period, at the tail end of the Vining occupation.

The distribution of Savannah and Etowah ceramic sites in the region is shown in Figure 80. An Etowah site is located just south of the Stuckey Tract within the Bleckley County Public Fishing Lake (Gresham 1999; Benson et al. 2001), while a Savannah site is located just to the north of the Stuckey Tract. Downriver in the Big Bend region, Stephenson et al. (1996) have identified three primary centers and several outlying farmsteads dating to the Middle Mississippian Savannah period (Figure 81). The Middle Mississippian occupation of this area is believed to have been of relatively short duration, lasting only a couple of generations before its demise. With the limited data, the precise nature of this occupation at Site 9BY51 is unknown, yet its prominent place in earlier prehistory, the possible mound, and its topographic setting suggest that it could represent an important political center during this period. The lack of Mississippian sites in the uplands bordering 9BY51 is intriguing. If 9BY51 was the location of an important political center and village, then one would expect to find some evidence of usage of the surrounding area which would be within its sphere of control. Conversely, if 9BY51 represented a Mississippian outpost



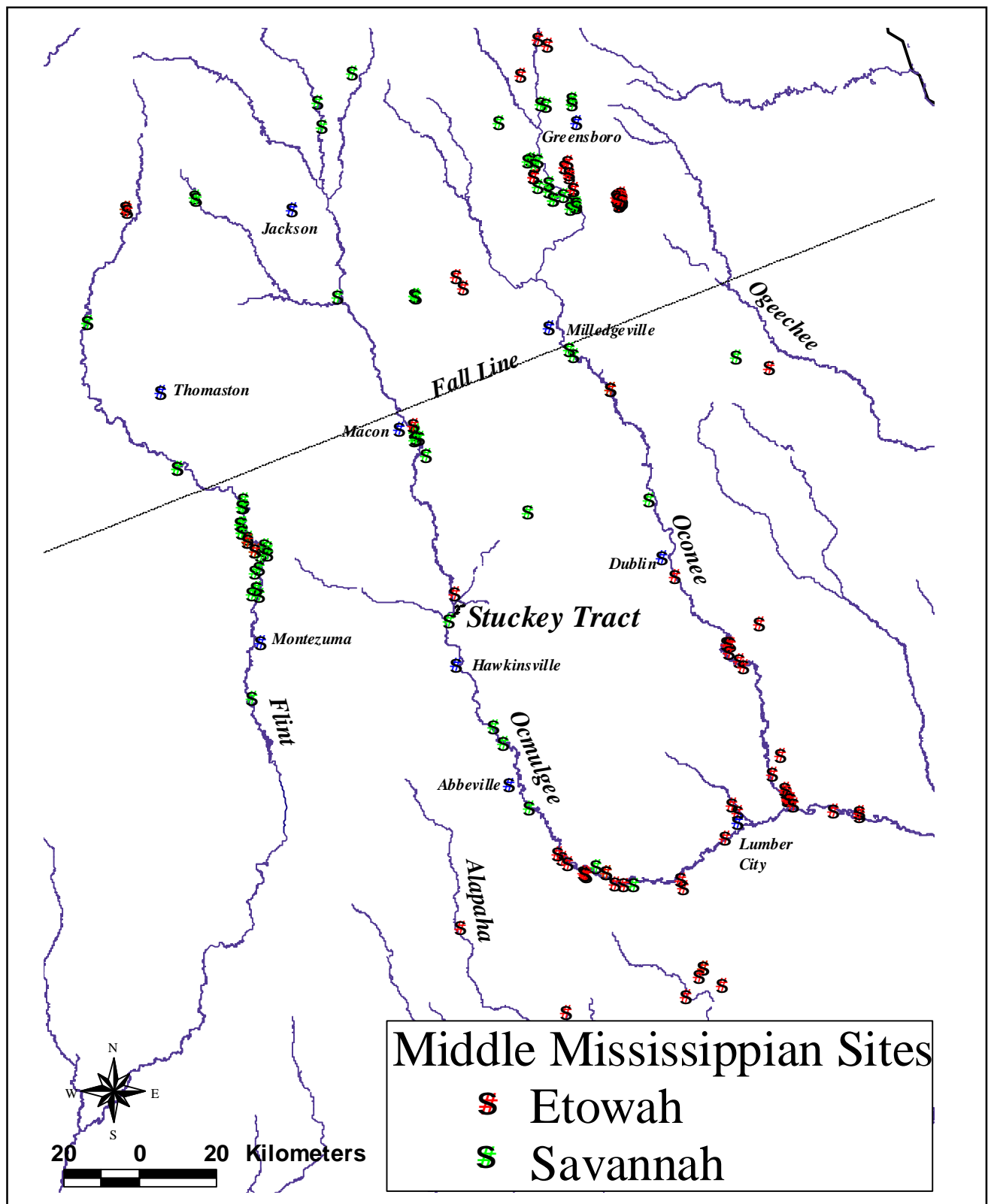


Figure 80. Regional Middle Mississippian Sites.

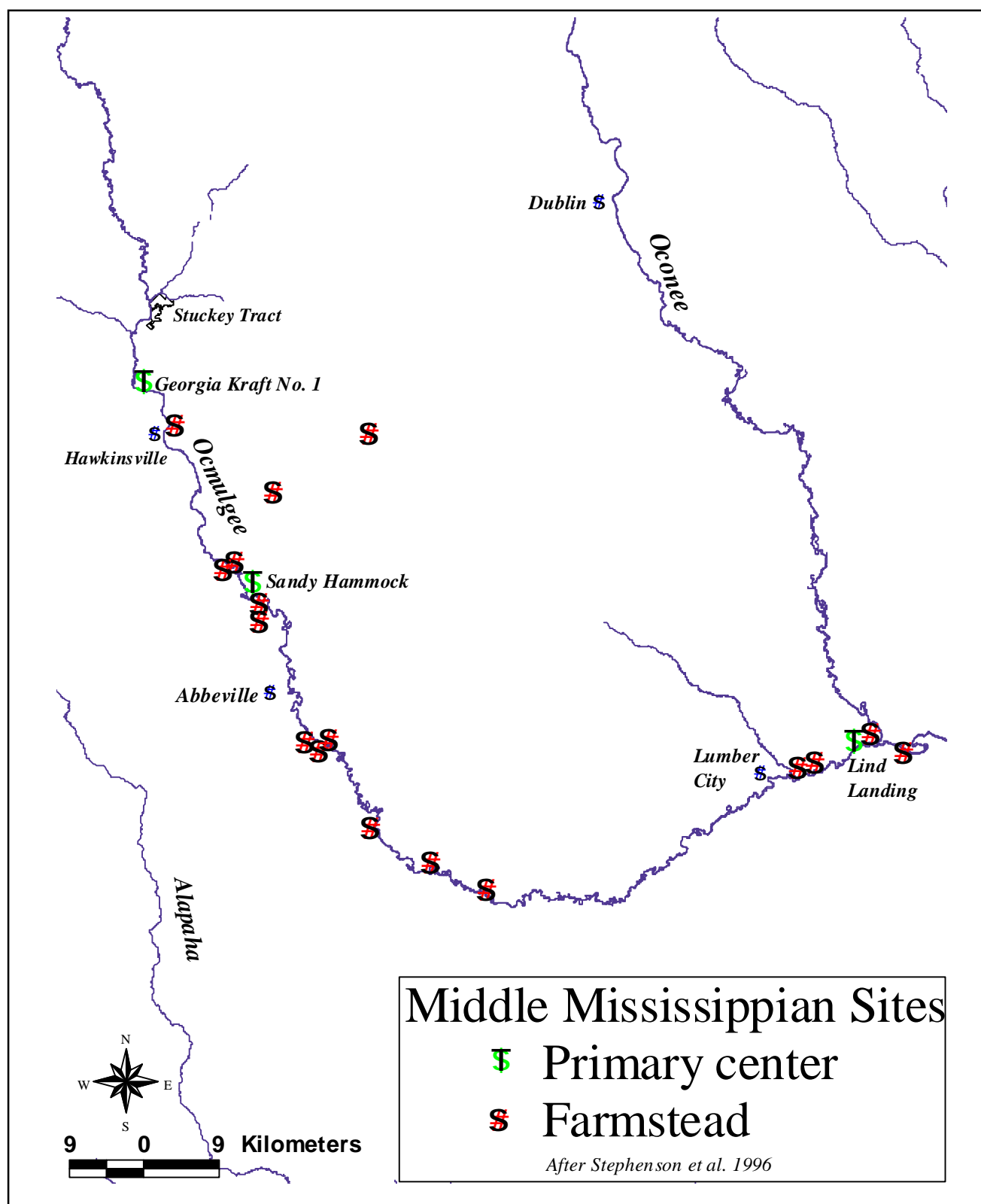


Figure 81. Middle Mississippian Sites in the Big Bend Area.

occupied by complicated stamped pottery groups, perhaps the contingent of Vining peoples in the uplands effectively formed a border against incursion and kept them isolated in the bottomland. Perhaps intense conflict between Vining peoples and Mississippian complicated stamped groups was a primary factor in the unsuccessful colonization of the Coastal Plain by the latter.

Archaeological evidence from sites dating to this time frame in Georgia – particularly small triangular arrow points and the occurrence of palisades which often surround sites – has been used to argue that at least some level of warfare was present (e.g., Worth 1996). Overall, most of the Vining sites in the Stuckey Tract are situated on ridge spurs along the edge of the upland flat which borders the vast bottomland of the Ocmulgee River and Shellstone Creek. While this settlement pattern could be used to argue that the Vining occupation was arranged to prevent incursion of non-Vining peoples into the uplands from the bottomland, it could also be argued that it suggests the Vining peoples were not overly concerned with attack from neighboring groups. The occurrence of the three dispersed Vining sites on ridges south of the main concentration support the latter scenario. Regardless, the Vining settlement pattern in the Stuckey Tract contrasts with Raccoon Ridge (Worth 1996:63), a large concentrated settlement which is interpreted as an outpost on the northern Vining frontier near Woodstock territory. Opportunistic survey of an approximately 2 km area surrounding Raccoon Ridge located no other Vining sites, and numerous small triangular points were recovered from that site, suggesting that the Vining population at Raccoon Ridge was involved in chronic warfare with neighboring groups.

As Worth (1996:64) points out, an important component of addressing the relationship(s) among groups during this period of late prehistory is determining the processes which have lead to the composition of these various ceramic assemblages. Specifically, for any mixed archeological assemblage, we must be able to discriminate between gradual transformation of the ceramic assemblage and sudden replacement of one tradition with the concomitant exclusion of another. Such discrimination will greatly enhance our understanding of the remains we find in the archaeological record. The limited testing data from 9BY51 simply cannot be used to argue for one scenario instead of the other; specifically, whether the interaction between the Vining simple stamped peoples and the complicated stamped pottery groups was conflictual or peaceable in nature. As outlined above, both scenarios can be developed from the present data.

Evidence for Late Mississippian occupation in the Stuckey Tract is altogether absent. Archaeologically, this area, as well

as the Big Bend region downstream, appears to have been abandoned during this time. However, at the time of the de Soto expedition, 16<sup>th</sup> century populations were present not too far to the north of the Stuckey Tract. Based on the reconstruction of de Soto's route through the Southeast (Hudson et al. 1984), the project vicinity was under the control of the chiefdom of Ichisi, which was centered upriver at the Lamar site at present-day Macon. The Spanish entrada appears to have first come into contact with Ichisi peoples near Westlake, which is approximately 4 km north of the Stuckey Tract. Hally (1994) believes the sphere of control exerted by the Lamar polities may have extended in diameter up to 40 km, and shows the Ichisi polity extending downriver from the Lamar site approximately 30 km. The Stuckey Tract is located approximately 34 km downstream from the Lamar site. If the Spanish entrada did encounter an Ichisi village near Westlake, which is just under 30 km from the Lamar site, then Ichisi control may have extended into the project area. The simple Ichisi chiefdom itself may have been under the control of the paramount Ocute chiefdom (Hudson 1994). Ocute is posited to have been centered somewhere between the present-day towns of Milledgeville and Greensboro on the Oconee River, while a tributary chiefdom referred to as Altamaha lay approximately 25 to 55 km downriver (Hudson et al. 1984; Hudson 1994). Nevertheless, the lack of remains from this period and its situation at the edge of the Lamar polity suggest that it may have functioned as part of a buffer zone at this time (see Anderson 1990, 1994).

## FUTURE RESEARCH ISSUES

In conjunction with regional data, the survey and very limited testing data from the Stuckey Tract have helped to elucidate the prehistory of the Middle Ocmulgee River valley. As is frequently the case however, it has also raised many questions and issues which should guide future prehistoric research in the valley and surrounding central Georgia.

### *Site Formation and Survey Methodology*

The identification of cultural remains on slopes leads to questions concerning their archaeological context and the survey methods which may help in the discovery of such remains. Are they *in situ* or have they been washed and eroded down slope from above and buried with colluvium? Can we identify such site formation processes prior to, during, and/or after fieldwork? If such occurrences are *in situ*, then archaeologists need to reexamine assumptions about site locations and predictability models. Every now and then, often as a result of an archaeological investigation, the author is reminded that human behavior is unpredictable. If, as scien-

tists, we want to rigorously and thoroughly examine human settlement patterns within a given area, we need to employ a systematic sampling method which is designed to negate the effects of sample bias. Practically, this means searching for cultural remains in areas which are commonly overlooked, such as slopes. Indeed, discovering sites in areas where they are not usually found can be a basis for eligibility of such sites for the NRHP.

This leads to a discussion of the two primary survey methodologies which are typically used to locate archaeological remains in the Southeast: site probability survey and systematic survey. The former method is commonly and interchangeably referred to as landform survey, site predictive survey, judgmental survey, or intuitive survey. Generally, this is a landform-based method where surveyors focus on the landforms which are thought to have the highest probability of holding sites, such as ridge spines, knolls, ridge ends, floodplains, and elevated stream terraces. Using such a strategy, surveyors typically “run down the ridges” and shovel test the high probability spots most intensively, and give little attention to low and medium probability areas such as side slopes, bench terraces, or small floodplains. Essentially, surveyors focus on areas where they think a site should or would be, and exclude areas believed to have low site potential.

A systematic survey strategy is designed to cover all areas, regardless of landform type and site potential. Under such a system, a project area is essentially gridded with regularly-spaced survey transects and shovel tests. Surveyors follow straight-line transects along a pre-determined compass bearing, thereby creating parallel lines at a fixed interval (typically 30 m). To make the systematic method more effective in site location, it may also be flexible: surveyors should leave their transects temporarily to investigate the area lying between the transects when they feel (intuitively or judgmentally) that a cultural resource may be present in that location.

Proponents of the intuitive method argue that by focusing on high probability areas, more cultural resources are discovered. Yet not only are the same high probability areas covered with a flexible systematic strategy, but low and medium probability areas are covered as well. A significant advantage of the method is cost-effectiveness when compared to the systematic method, simply due to the fact that less ground is covered. Disadvantages of the intuitive method include surveyor bias, and of course, non-systematic survey coverage. In my experience, over the course of a project, a surveyor using the intuitive survey method tends to ignore the standard 30 m shovel test interval, increasing the interval and only digging shovel tests where they think they will get a positive test. Furthermore, although surveyors may start

out 30 m apart at the beginning of their transects, this distance is often increased, particularly when the landform is wider than the crew can cover in one or two passes. One may begin to rationalize taking more and more liberties with the shovel test and transect intervals, particularly in areas that are not easy to traverse, such as dense briar or privet patches, by arguing that it is a low probability area and thus does not need to be investigated.

The author was trained to survey using the intuitive method, and employed this strategy for many years. However, over the last several years, I have been using the systematic method. My methodological shift was facilitated by the advent of GPS technology, the advocacy and adoption of more strict survey standards by various government agencies and professional associations, and a simple desire to find all of the sites within a given project area. Having used both methods extensively, I strongly believe that a flexible systematic survey strategy is not only much more effective in locating archaeological remains, measurable simply in terms of site frequency, but also that it provides a more rigorous and accurate scientific study overall. Areas having been fully covered via systematic survey are more reliably comparable in numerous ways, such as site frequency, settlement patterning, type and density of cultural components, and artifact type and frequency. Furthermore, by more fully covering the project area, a systematic study increases the chance that an undiscovered site is not impacted by the activities driving the archaeological survey. It also eliminates surveyor bias. Admittedly, it is much more pleasurable to conduct landform-based survey, which feels more like a hike in the woods, than the straight-line transecting of systematic survey. Yet the scientific validity of a survey project and its results should be of top priority. Another primary consideration is the practicality of each method in relation to the project area's topography: a mountainous area with narrow ridges and very steep slopes would best be served by a landform survey, while a flat area with very little relief would require systematic survey.

### *Cultural Prehistory*

What is the relationship between the various Late Woodland and Mississippian groups in the region? How are these relationships manifested in the archaeological record? What are the relationships of the “regional” wares to the Macon Plateau wares (see Pluckhahn 1997)? What do these various ceramic traditions mean in terms of cultural process and dynamics? Can the ceramic data be used to address the origin and historical trajectory of the Macon Plateau culture (see Hally and Rudolph 1986; Smith 1984)? Are Georgia populations converging in the Fall Line area, in response to an intru-

sion of “Mississippian” peoples? If so, what are the factors driving this coalescence? Containment? Trade/interaction? What cultural processes drove the Mississippian settlement of the Coastal Plain portion of the Ocmulgee River, and why was it short-lived (see Stephenson et al. 1996)?

Why are there so many Late Woodland – Emergent Mississippian pottery traditions in the area, such as Vining, Napier, Weeden Island, and Woodstock, and what are the relationships among the groups producing these pottery types? At the end of the Middle Woodland period, did local group fissioning occur? Specifically, did Swift Creek culture develop into these local traditions? Does this explain the similar design motifs and pottery technology between Swift Creek and later wares? What are the diagnostic markers for the local traditions? Can the plain wares within any of these pottery traditions be discriminated on the basis of morphological or physical characteristics?

What is the precise nature of the simple stamped occupation within the Stuckey Tract? How does this community relate to the Vining population as a whole? Why is the Vining occupation in the Stuckey Tract so intensive? Was the chert outcrop at site 9BY65 controlled by the Vining people? Was it used for trade with both Vining and non-Vining populations? If so, what was received in return?

Why is there practically no cordmarked pottery in the Stuckey Tract, when it is so common downstream in the Big Bend area? Was there a cultural boundary in the Stuckey Tract vicinity which operated to prevent the northern extension of the cordmarked tradition, as implied by the study data? Did the Vining simple stamped pottery users prevent the cordmarked pottery users from settling in and occupying the area? What type of interaction occurred between these groups?

What accounts for the archaeological remains on slopes? Are sites on slopes *in situ* or redeposited? Is lithic procurement the primary factor in the location of sites on slopes? Is

our survey methodology sufficient to find sites on slopes in other areas?

What role did the chert resources within and around the Stuckey Tract have throughout prehistory? How did it affect settlement patterns, group mobility, interaction, site formation, and trade? Can chert from surrounding areas and sites, such as the Big Bend and Raccoon Ridge, be traced back to the Stuckey Tract or nearby deposits?

What is the relationship between pure fiber-tempered wares and mixed fiber and sand/grit pottery? Does the addition of sand/grit to fiber-tempered pottery represent an unconscious techno-functional evolutionary improvement or an intentional cultural addition, or some combination of these processes? Do the mixed temper wares post-date the pure fiber tempered wares, as is generally believed? Is there an evolutionary or cultural connection between simple stamped fiber tempered wares and subsequent Deptford wares?

## CONCLUSION

The archaeological investigation of the Stuckey Tract has revealed the presence of numerous significant prehistoric cultural remains dating to the Early Archaic, Late Archaic, Woodland, and Mississippian periods. Using the survey and limited testing data, in conjunction with data from the vicinity, we were able to examine culture history, settlement patterns, and material culture during these periods.

This study highlights the significance of the archaeological record of the Middle Ocmulgee River Valley. While the prehistoric importance of both the Fall Line and the Big Bend areas has long been known, the present study and the recent investigations at the Bleckley County Public Fishing Lake by Southeastern Archeological Services (Gresham 1999; Benson et al. 2001; data recovery report in progress) has helped to bridge the gap between these two areas. Additional archaeological investigation of the resources within and around the Stuckey Tract will undoubtedly provide an abundance of information which will have the potential to address many of the research questions and issues listed above.





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